Understanding the Early Years

Community Research in Child Development

Results of the Community Mapping Study in North York

Sarah Connor
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Sidney McLean
Applied Research Branch
May 2001

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Community mapping is a relatively new and challenging means of communicating data. To date, very few social researchers have adopted it. We are grateful for the timely advice provided by Nuala Meagher and Petr Varmusa of Toronto Children's Services, the organization that produced the *Toronto Report Card on Children*, an ongoing project designed to assess the health and well-being of children in Toronto. We also wish to extend our thanks to all the community researchers working with the *Early Years Action Group* in the former city of North York who collected the data for this project. We appreciate the support provided by the *Early Years Action Group* and the larger North York community. Their tireless efforts to help give children in the community the best possible start are impressive and inspiring.

We wish to thank members of the Evaluation and Data Development Division at Human Resources Development Canada and the Census Division at Statistics Canada for their assistance with the procurement of census data for the North York region. Finally, we extend our thanks to Kathleen Guy and Associates and all the members of the Applied Research Branch for their hard work and dedication for helping us to complete this report

Disclaimer

The ever-changing nature of community programs and services adds extra complexity to a community mapping study. The *Early Years Action Group* did its best to ensure the collection of a complete and accurate inventory of resources. Human Resources Development Canada (HRDC) created this report based on the data that were available and information provided by the community's researchers. Therefore, HRDC is not responsible for omissions or errors in this report due to incomplete data. The resources collected and studied for this report are not intended to be an exhaustive listing, but rather represent an important first step in understanding the programs, services, and physical and social environments of the North York community

Study Highlights

Understanding the Early Years is a national initiative that provides research information to help strengthen the capacity of communities to make informed decisions about the best policies and most appropriate programs to serve families with young children. This initiative seeks to provide information about the influence of community factors on children's development and to enhance community capacity to use the data both to monitor early childhood development and to create effective community-based responses. Understanding the Early Years uses three main components to collect data about the community's children from their parents, teachers and the children themselves. It also gathers information about the community environment in which the children are living.

This report is based on research conducted in the community of North York, Ontario (now incorporated into the new city of Toronto as the North Quadrant). It focuses on the results of a Community Mapping Study, which was developed to gather information about the physical and social environments in the children's neighbourhoods as well as children's programs and services.

Results indicate that North York is a community with many families with children, where green space, parks and recreational areas are generally available. The majority of neighbourhoods scored well on measures of the quality of their physical conditions. In many areas throughout the community, educational and employment levels were high and household incomes were above the national average. However, a significant proportion of children six and under (67%) were found to be living in neighbourhoods that were considered to be at higher risk of socio-economic disadvantage.

North York has a variety of programs and services available for its children in their early years, but these resources are not always distributed evenly throughout the community. Often, resources were found where the density of children was higher, in areas of both higher and lower socio-economic risk. However, over half of the children in the community lived in relatively resource-poor neighbourhoods indicating a possible discrepancy between the location of resources in North York and the location of families with young children who might need them.

This study of community resources, along with the data collected in the other components of the *Understanding the Early Years* initiative, should provide new evidence to help guide the development of community strategies to improve child outcomes.

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1. Helping Communities Give Children the Best Possible Start

Improving our understanding of the factors which help or hinder child development - and increasing community tracking of how well children are developing - are crucial to ensuring the best possible start for Canada's children.

Developed by the Applied Research Branch (ARB) of Human Resources Development Canada (HRDC), *Understanding the Early Years* (UEY) emerged in response to a growing recognition that the kind of nurturing and attention children receive in early childhood can have a major impact on the rest of their lives. Researchers have found that the early years of development, from before birth to age six, set the base for competence and coping skills that will affect learning, behaviour and health throughout life (see McCain & Mustard, 1999; and Doherty, 1997 for a discussion of current research in this area). These early years are critical for children's development as they shape long-term outcomes, not only related to academic and employment success, but also to children's overall health, quality of life, and ability to adapt.

UEY seeks to provide information about the influence of community factors on children's development and to enhance community capacity to use these data to both monitor early childhood development and to create effective community-based responses.

Within the city of North York (now Toronto – North Quadrant), Ontario, an innovative community effort called the Early Years Action Group (EYAG) was launched in1996. This group consists of a broad-based coalition of individuals and organizations committed to meeting the needs of children in their early years and ensuring that they are ready to learn at entry to formal schooling. Because of the congruence of the goals of the EYAG and UEY, North York served as a prototype project before the UEY initiative was piloted in other communities. The research was conducted in North York throughout 1999 (see Appendix A for more information on EYAG).

Understanding the Early Years is a national initiative which provides research information to help strengthen the capacity of communities to make informed decisions about the best policies and most appropriate programs to offer families with young children. It is designed to assist selected communities across Canada in achieving their goal of improving early child development by providing them with the necessary information to enhance or adapt community resources and services. It gives communities knowledge of how childhood experiences shape learning, health and well- being, allows them to track how well their children are doing, and to optimize child development through the strategic mobilization of resources and programs.

The UEY initiative builds on the National Longitudinal Survey of Children and Youth (NLSCY), jointly managed by HRDC and Statistics Canada. The NLSCY, which began data collection in 1994, is the definitive source of national data for research on child development in Canada. Its purpose is to increase our knowledge about the factors affecting child development and well-being. Initial research on child development has shown that community factors may impact on child outcomes (Kohen, Hertzman, & Brooks-Gunn, 1998), but only further research can

show the magnitude of the impact and the mechanisms through which it occurs.

One of the main purposes of UEY is to help determine the extent and nature of community influences on child development and how these might vary from child to child and community to community. It includes three independent but complementary data collection components, which allow for more detailed monitoring and reporting at the community level. Together, this information will help fill in gaps in our understanding of the community factors which affect early child development and the ways by which a community can best support the needs of young children and their parents.

Components of the Understanding the Early Years Initiative

The Early Development Instrument: What we learn from teachers

The Early Development Instrument (EDI) (formerly called the School Readiness to Learn Instrument) is a questionnaire for kindergarten teachers. It was developped by Drs. Magdalena Janus and Dan Offord at the Canadian Centre for Studies of Children at Risk at McMaster University in Hamilton, Ontario. EDI is designed to measure children's early development before they start first grade in the categories of:

- physical health and well-being;
- emotional health and maturity;
- social knowledge and competence;
- language development and thinking skills; and
- communication skills and general knowledge.

This assessment is not designed for rating individual children; rather, it is a population-based measure designed to indicate how children are developing relative to others of the same age in their community. It offers an indicator to a community of how well it supports children before they start school. This measure was administered in 88 public schools within the former North York School Board in the spring of 1999.

The NLSCY Community Study in North York: What we learn from parents

An enhanced community instrument based on the NLSCY has been developed to collect more detailed information from parents to help researchers assess family use of community resources and the impact of these community resources on children's developmental outcomes. Randomly selected households were chosen to participate in this voluntary survey. The information can be analyzed to determine the relative importance of community factors compared to individual and family factors on child development. The NLSCY – Community Study for North York was administered during the spring of 1999.

The Community Mapping Study: What we learn from community mapping

This report focuses on the results of the Community Mapping Study, conducted in North York in the summer of 1999. It was developed to gather information about:

- the physical and socio-economic characteristics of the neighbourhoods in which children live;

- the kinds of programs and services that were available to children aged six and younger and their parents;
- where these programs were located; and
- how these programs were being used.

Such information will be provided to communities so they can make the best use of their resources to support early childhood development.*

Three data sources were used: the 1996 Census, neighbourhood observations (see Appendix D for details), and a program survey (see Appendix F) which compiled an inventory of neighbourhood services. Putting together the information collected from these three components will provide a framework for analysis that will not only suggest *what* is working well or less well, but which will also give some indication as to *why* services and neighbourhood resources work the way they do. This analysis will also provide the basis for community-wide discussions on both how to develop community strategies and to allocate resources with the goal of optimizing child development outcomes.

Information can be used to determine:

(1) if key resources are available to all children,

(2) if resources are present close to where children live,

(3) how to plan, prioritize and allocate efforts to provide the most effective resources for child development (by using mapping data in conjunction with the theoretical literature regarding community influences and the data collected with the NLSCY).

* For more information on the theoretical framework underlying this research and the selection of instruments, refer to Connor & Brink, 1999.

2. The North York Community

Many competing theories exist in the literature to explain how and why communities have an influence on children's development. Some focus on the physical environment in which children grow, others on the social environment and the interactions among community's residents, while still others examine the role of community programs and services. This report examines the social, physical and resource environment of North York with respect to early childhood development.

Since this research began, the city of North York has been incorporated into the new City of Toronto as the North Quadrant. However, for the purposes of this report, the term "North York" will continue to be used. The North York community covers a large, urban area of approximately 176.49 square kilometres. It is bordered to the north by Steeles Avenue; to the east by Victoria Park; the west, past the Highway 400; and in the south, approximate boundaries would stretch south of Lawrence Avenue. The Highway 401 runs through the middle of the city. Its total population in 1996 was 589,653; with 53,420 children aged six and younger (comprising 9.1% of the population).

Map 1 - Where did the children live?

This map displays the distribution of children aged six and younger across the community; each dot represents 10 children.

Defining the community in which children live

The terms "place," "neighbourhood" and "community" are often used interchangeably to refer to related, but different concepts. As a geographical entity, "place" is often defined by political, administrative or other physical boundaries. The concepts of neighbourhood and community incorporate aspects of psychology and sociology together with geography, and may be defined by the social interactions and functions that occur in a particular place in addition to its actual location. Although there are numerous ways of defining neighbourhoods and communities, for the purposes of this report, neighbourhoods will be defined and referred to using the geographical boundaries of Enumeration Areas (EAs), while the terms "community" and "city" will apply interchangeably to North York as a whole. An EA (in this report, a neighbourhood) is the smallest standard geographic area for which census data are reported. There are 795 EAs in North York. Groups of EAs are known are Census Tracts; there are 111 Census Tracts in North York.

The number of children appeared to be distributed across all parts of the city of North York, with particular areas where the concentration of children was quite high.

Parks and green spaces were often located near areas with high numbers of children.

Children were particularly concentrated in neighbourhoods along Jane Street and in the southeastern corner of the city.

Map 2 - How were green space and industries distributed in North York?

North York is a mainly residential community, with several large industrial zones, particularly in the north west region. Green space, parks, play and recreational areas are prevalent, mostly in the north west region and the eastern part of the community.

Map 3 - Which areas had the highest proportion of families with children?

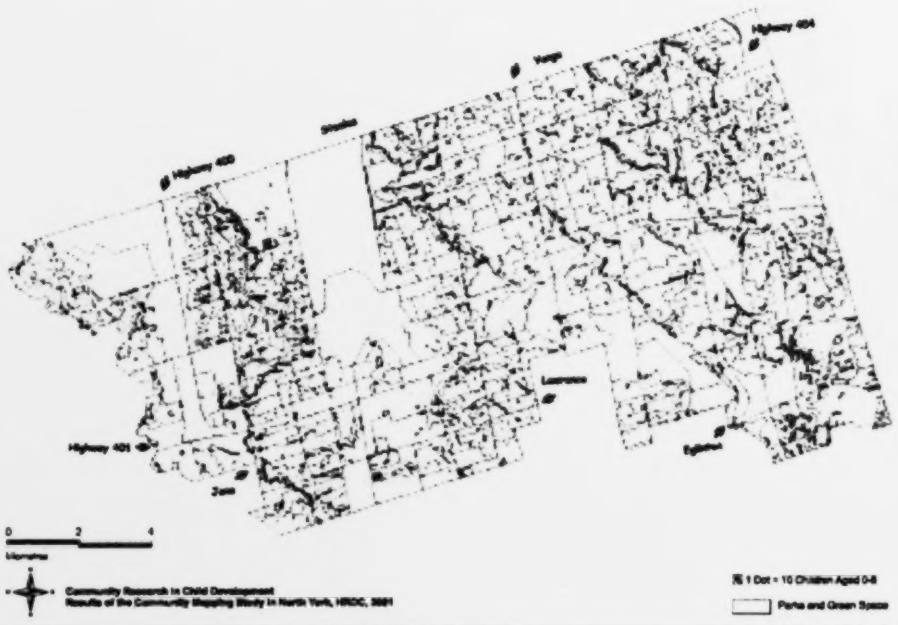
There were approximately 107,930 families with children in North York, and of the total number of households, 51%* were families with children.

Almost 25% of neighbourhoods contained over 200 families with children.

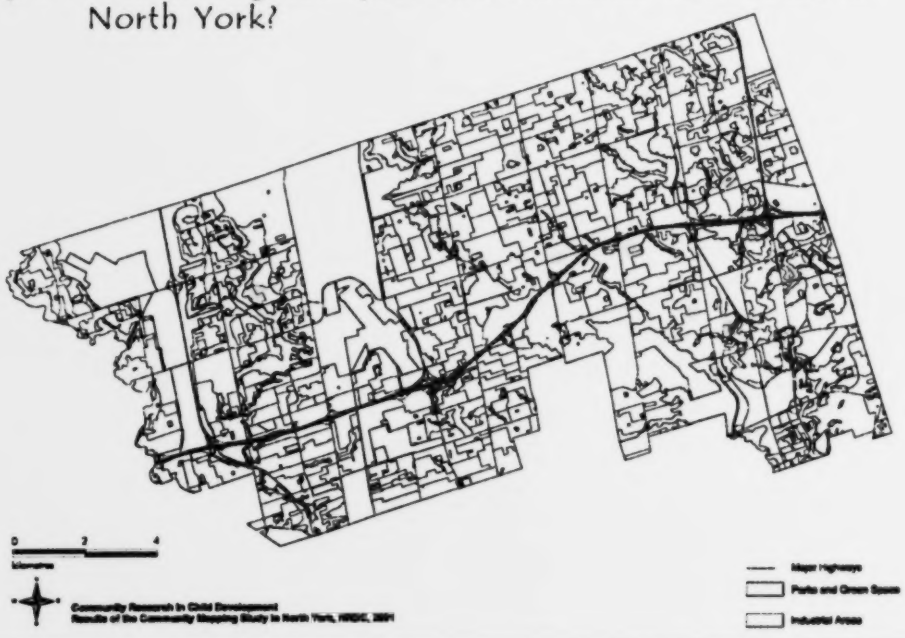
The number of households that were comprised of families with children was evenly distributed on the western and eastern sides of the community.

* Many of the numbers have been rounded throughout the report.

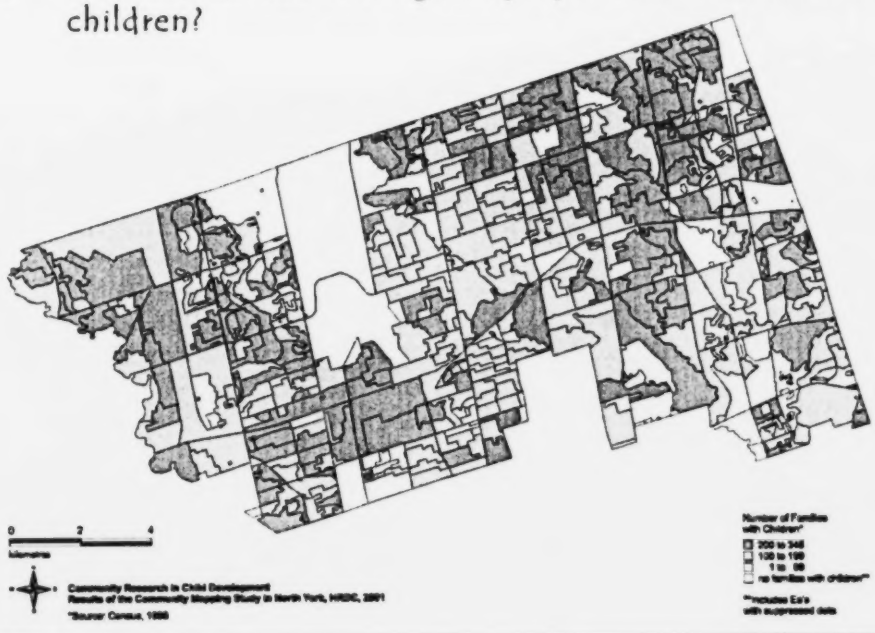
Map 1 – Where did the children live?



Map 2 – How were green space and industries distributed in North York?



Map 3 – Which areas had the highest proportion of families with children?



3. The Social Environment in North York

A child's social interaction with other people can have an important influence on his or her development. Children's capacity for successful, positive social interaction begins at a young age, and is influenced by early close relationships, their experiences with other children and the guidance and instruction that comes from parents and other family members (see Doherty, 1997). These relationships can be complemented by interactions with other people beyond the family, such as care-givers and residents of their neighbourhood and the larger community. Children's expectations and behaviours can be affected by role models in the community.

This section provides socio-economic and demographic information about the neighbourhoods where children in North York lived using data from the 1996 Census. A number of characteristics of the residents, such as family status, education, employment and income, and multiculturalism were examined. This analysis helps researchers answer a number of critical questions related to the social environment of children living in North York's various neighbourhoods.

Population mobility

How many of North York's neighbourhoods were stable or transient and how many children and families resided in such neighbourhoods?

Why ask this question?

Neighbourhoods with higher levels of stability are those in which community members are more likely to act on behalf of the common good of children. One way to measure neighbourhood stability is by measuring the proportion of individuals who made a residential move in the last year. High rates of residential mobility and transiency in neighbourhoods often correspond to social disruption and weakened social ties, which in turn can create a climate more conducive to crime and other types of anti-social behaviour. Thus, social ties are an important prerequisite to neighbourhood cohesion and collective efficacy - defined as social cohesion among neighbours and their willingness to intervene on behalf of the common good (Sampson, Raudenbush, & Earls, 1997). In other words, in neighbourhoods where residents are isolated from each other, social ties tend to be weak and a sense of common interest even weaker.

Some theorists suggest that positive peer and adult role models in the community can influence child development and well-being, particularly in terms of behaviour and learning, while negative environments may deprive children of positive social supports, while exposing them to unhealthy or otherwise anti-social behaviours.*

Map 4 - Which areas had the highest mobility?

The average number of North York residents who had changed homes in the previous year was 15% of the population - lower than the national average of 16%.

*Furstenberg & Hughes, 1995; Jencks & Mayer, 1990.

A few isolated neighbourhoods scattered throughout North York had high levels of mobility. Such transient neighbourhoods were also associated with higher levels of recent immigrants.

There were 60 Enumeration Areas (EAs) (8%) in North York characterized by high mobility (29% or more people in the area had moved within the past year) and these EAs had an average poverty rate of approximately 40%. Half of their population (46%) was comprised of families with children. In total there were 4,035 children aged six or younger living in these enumeration areas, which could possibly be affected by the multiple factors of instability, poverty and disadvantage. Specific community resources may need to be targeted to the children in these neighbourhoods.

Education and employment

How educated were people in the community and how many residents were employed?

Why ask this question?

Education levels of residents are considered a crucial part of the socio-economic environment of communities where children grow and develop. Adults in the community with high levels of education are more likely to be employed, less likely to live in poverty, and more likely to serve as positive role models and mentors to their own children and children in the community. Conversely, those with lower education levels may face diminished employment prospects, and are more likely to live in poverty. The education of parents has been shown to be related to the development of their children.

Problems in neighbourhoods with high unemployment rates may be compounded by higher poverty and lack of available resources.

Adults in a community with high levels of education are more likely to be employed, less likely to live in poverty, and more likely to serve as positive role models and mentors to their own children and children in the community.

Such neighbourhood characteristics can negatively impact a child's environment and overall well-being. Research has shown that neighbourhoods with high levels of unemployment can impact negatively on children's behavioural outcomes (Kohen, Hertzman & Brooks-Gunn, 1998).

Several studies have also found relationships among the general socio-economic climate of neighbourhoods (of which education and employment are important components) and the development of the children who live in them. Such studies have shown that neighbourhoods with residents of higher average socio-economic status were associated with more positive developmental outcomes (Brooks-Gunn, Duncan, Klebanov, & Sealand, 1993; Chase-Lansdale, Gordon, Brooks-Gunn & Klebanov, 1997; Halpern-Felsher et al., 1997).

Map 5 - Which areas had the highest proportion of people with a post-secondary education?

Approximately 41% of North York residents had completed some type of post-secondary education (college diploma or university degree). These individuals lived mainly in the central and eastern portion of the community.

One-half of all children aged six and younger (26,710) lived in neighbourhoods with high levels of residents with post-secondary completion.

Very few neighbourhoods had fewer than 15% of residents with post-secondary education. The poverty and unemployment rates in these neighbourhoods were similar to the national average.

Map 6 - Which areas had the highest proportion of people without a high school diploma?

In North York, 33% of people aged 15 and over had not yet obtained a high school diploma. This figure was slightly lower than the national average of 37%.

However, 39% of North York residents lived in neighbourhoods where the percentage of individuals without a high school diploma was greater than the national average. Nearly half (45%) of all children aged six and younger in North York lived in these neighbourhoods, which were largely concentrated in the western half of the community.

Areas with a high proportion (above or equal to 54%) of individuals who did not have a high school diploma were home to 6,160 children (about 12% of the North York population aged six and younger). These 83 areas also had high average unemployment and poverty rates (18% and 42% respectively).

Map 7 - What were the employment rates of the neighbourhoods?

The unemployment rate in North York was 10.4%, measured at the time of the 1996 Census. This rate was lower than the unemployment rate for Canada overall, which was 11.0%.

There were a few isolated areas in the community with high unemployment (greater than 22%), located mainly in the northwest and southeast regions of North York. These areas were in some cases also marked by other forms of social disadvantage, such as a proportion of persons without a high school diploma above the national average and a high poverty rate.

Household incomes

What were the income levels of North York residents?

Why ask this question?

Adequate household income is essential to purchase goods and services, to access resources (through transportation, for example) and to benefit from cultural resources such as books and theatres. Neighbourhoods where a high number of residents live in poverty can pose challenges to families and children, service providers and policy makers. Such areas may lack resources, and residents could be deprived of interaction with mainstream social networks and role models through processes of isolation and segregation. These neighbourhoods may also experience overcrowding, lower levels of safety, a less-desirable physical environment, and a scarcity of resources.

Map 8 - What was the average household income in North Yorkneighbourhoods?

In relation to Canada as a whole, North York is relatively affluent as measured by average household income. The average 1996 household income in North York was $54,173, which was approximately $8,000 higher than the national average household income of $45,739. More than half of North York's neighbourhoods had average incomes above the national average household income.

The neighbourhoods with the highest average household incomes (greater than $67,000) had the highest proportion of people aged 15 and over with a post-secondary education.

Map 9 - Which areas had the highest proportion of low income households?

In North York, the individual poverty rate (measured as the proportion of individuals living below Statistics Canada's Low income Cut-Off) was 28%, compared to the national rate of 19%.

Some 224 neighbourhoods had 36% or more of their residents living in poverty. These neighbourhoods were distributed throughout the community, although larger clusters of low income households were located in the eastern and western sides of the community. Some low income areas were intermingled with more affluent neighbourhoods.

Over one-quarter of North York's population – and 20,565 children aged six and younger resided in these low income neighbourhoods. These areas also tended to have higher unemployment rates and, in some cases, residents with lower levels of education.

Over one-quarter of North York's population - and over one-third of children aged six years and younger resided in high-poverty neighbourhoods.

Family structure

What was the predominant family structure of households in the neighbourhoods?

Why ask this question?

While most children from lone-parent households do well, research has shown that a higher proportion of children with cognitive and behavioural problems come from such families (Lipman, Boyle, Dooley, & Offord, 1998; Ross, Roberts, & Scott, 1998). In addition, a higher incidence of two-parent families living in a neighbourhood has been linked to healthier child and adolescent development (Brooks-Gunn, Duncan, Klebanov, & Sealand, 1993).

Map 10 - Which areas had the highest proportion of families with children headed by a lone-parent?

In North York the proportion of families with children that were headed by a lone-parent was 27%, which was higher than the national average of 23%.

56% of all North York neighbourhoods had a proportion of lone-parent families greater than or equal to 23 %. Just under two-thirds of all children aged six and younger lived in these neighbourhoods, which also included an above average proportion of people living in poverty.

A relatively small number of neighbourhoods (128) had a disproportionately high proprotion of lone-parent families (greater than or equal to 42%). These neighbourhoods also showed other characteristics of disadvantage including: high unemployment rates and poverty.

Ethnic and linguistic diversity

How diverse was the community?

Why ask this question?

One of the characteristics specific to North York is its high degree of cultural diversity. In

Canada, the number of immigrants as a percentage of the total population was close to 17%. North York had an immigrant population of 51% – or three times the national average. Moreover, approximately one-quarter of North York's population had immigrated to Canada only recently, in the period from 1991 to 1996. Not surprisingly, 48% of residents in North York had a mother tongue that is not one of Canada's official languages. This degree of linguistic and cultural diversity, paired with the large size of the city and all that it has to offer, makes communities like North York attractive for immigrant settlement. However, such diversity can also present many challenges. For example, the ability to speak English or French – Canada's two official languages – is important to successfully navigate the many transitions involved in settling into a new country. Knowledge of a country's official languages allows for easier access to goods and services, and facilitates getting and keeping a job. The work of Kobayashi, Moore, & Rosenberg (1998), for instance, found that immigrant families who spoke neither of Canada's official languages were less likely to use formal community supports such as community and social service professionals, religious or spiritual leaders.

Map 11 - Which areas had the highest proportion of recent immigrants?

Neighbourhoods with a large proportion of their population, which had immigrated to Canada in the period between 1991 to 1996 (equal to or above the national average of 3.2%), were spread throughout the city.

High proportions of recent immigrants were found in both high and low income neighbourhoods.

However, there were clusters of neighbourhoods with many recent immigrants concentrated on the northeast section of the community and in other areas.

Map 12 - Which areas had the highest proportion of residents who did not speak English or French?

On average, approximately 6% of the population in North York did not speak either of the official languages, compared to 1.4% of the population in Canada.

Many neighbourhoods in the community had 5.2% or more of the population who did not speak English or French. These neighbourhoods were home to about 27,940 of North York's children six and younger.

The average individual poverty rate for these neighbourhoods was 35%, significantly higher than the average poverty rate in North York (approximately 28%).

Putting it all together: Creating a Social Index

A Social Index was developed that would provide both a general picture of neighbourhoods within the broader community and the number of potential challenges they faced. Nine variables were selected for their usefulness in describing the socio-economic context of communities, encompassing measures in the areas of education, employment, income level and multiculturalism. Each variable was then compared with the national average, which provided a threshold for evaluating the neighbourhoods. Having the national average as a standard of comparison will be important

for looking at variations among different areas of the country as the UEY initiative expands. It will enable comparisons within a community, among communities, and at the same time, to compare a particular community to the country as a whole. Four categories were then established: Low risk (one or two challenges); Somewhat low risk (three or four challenges); Somewhat high risk (five or six challenges); and High risk (seven or more challenges). (Refer to Appendix C for a more detailed description of how the Social Index was calculated).

In order to provide a composite measure of socio-economic risk in communities, a Social Index was developed to provide both a general picture of neighbourhoods within the broader community and the number of potential challenges they faced. Among other uses, the Social Index can serve as a tool to help communities better allocate resources to meet the needs of children and families by permitting analysis of concentrations of need and of the multiple demands placed on community services.

The following is a list of the nine variables that together make up the Social Index

1. Unemployment rate.
2. Individual poverty rate.
3. Proportion of individuals aged 15 and over without a high school diploma.
4. Proportion of families with children headed by a lone-parent.
5. Proportion of the population speaking neither official language.
6. Proportion of the population that immigrated to Canada since 1991.
7. Mobility in one year.
8. Home ownership.
9. Proportion of the total income in the EA coming from government transfer payments (i.e., Canadian Pension Plan, Canadian Child Tax Benefit, provincial social assistance payments).

Map 13 - What did the Social Index indicate about the socio-economic risks of neighbourhoods?

7,360 North York children aged six and younger lived in neighbourhoods with two or fewer risks.

35,955 children aged six and younger (67%) in North York lived in EAs considered to be at high risk (five or more challenges) as compared to 17,465 children (33 %) who were living in lower risk (4 or fewer challenges) neighbourhoods. The higher-risk EAs were located in the western part of the community, in the northeast corner and in the southeast corner.

Figure 1 – Proportion of North York children six and under living in neighbourhoods with varying numbers of risk factors

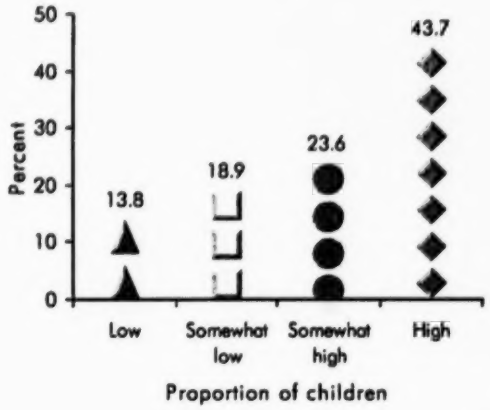


Table 1 – Number of children in EAs with differing numbers of risk factors

	Risk Potential of Neighbourhoods			
	Low risk (0 to 2 challenges)	*Somewhat low risk (3 to 4 challenges)*	*Somewhat high risk (5 to 6 challenges)*	*High risk (7 or more challenges)*
Number of EAs	125	171	183	256
Percent of EAs	17.0%	23.3%	24.9%	34.8%
Number of children aged 0-6	7,360	10,105	12,605	23,350
Percent of children aged 0-6	13.8%	18.9%	23.6%	43.7%
Individual poverty rate	8.9%	15.8%	27.8%	46.7%

Just under the majority of EAs fell somewhere in between the two extremes, with neither very many nor very few risk characteristics. These two middle categories – "Somewhat low" and "Somewhat high" – comprised roughly 48% of the EAs and 22,710 children six and younger.

How can this information be used on behalf of children?

- North York had a high proportion of recent immigrants and therefore can play to its strength as a culturally diverse area. The immigrant community is well established and can support newer immigrants to the area.

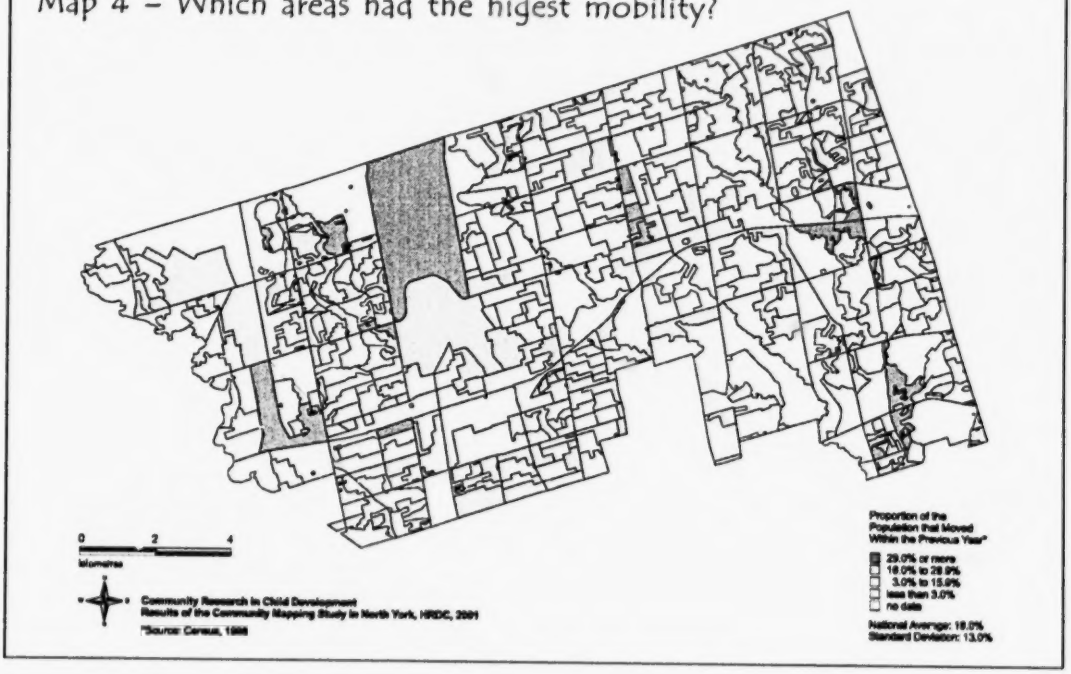
- While North York as a whole compared favourably with the national average on several indicators, a closer look at individual neighbourhoods showed polarities. Certain EAs in the western edge of the city, for example, were characterized by high proportions of residents with low educational levels and low incomes and high unemployment compared to the national average, thus implying that the needs of neighbourhoods may also vary. Some areas may require not only *more* services but *specific* services to overcome disadvantages.

- Single-entry systems can be used to identify families with need. Clustering programs in "single-window" centres located in these areas may improve access and use.

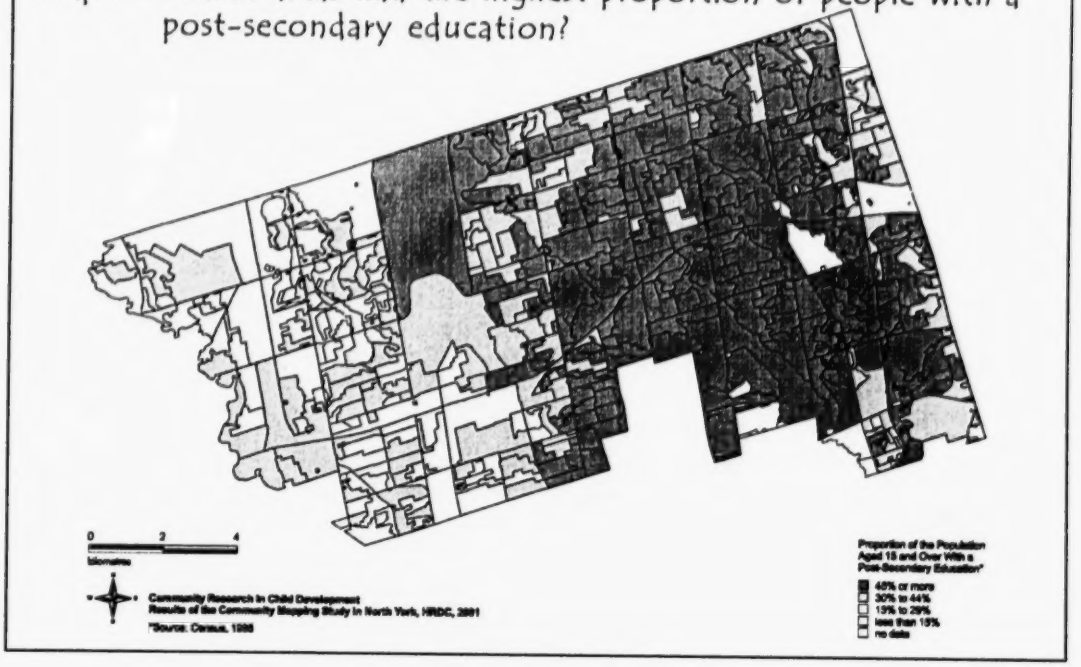
- There were higher densities of children in neighbourhoods with five or more risks. Multiple risk factors and high concentrations of children may require a change in current patterns of service allocation to reduce future problems.

- Community action could be directed to preventing spatial concentrations of problems (areas where problems are clustered) as well as exposure to multiple risk factors among families.

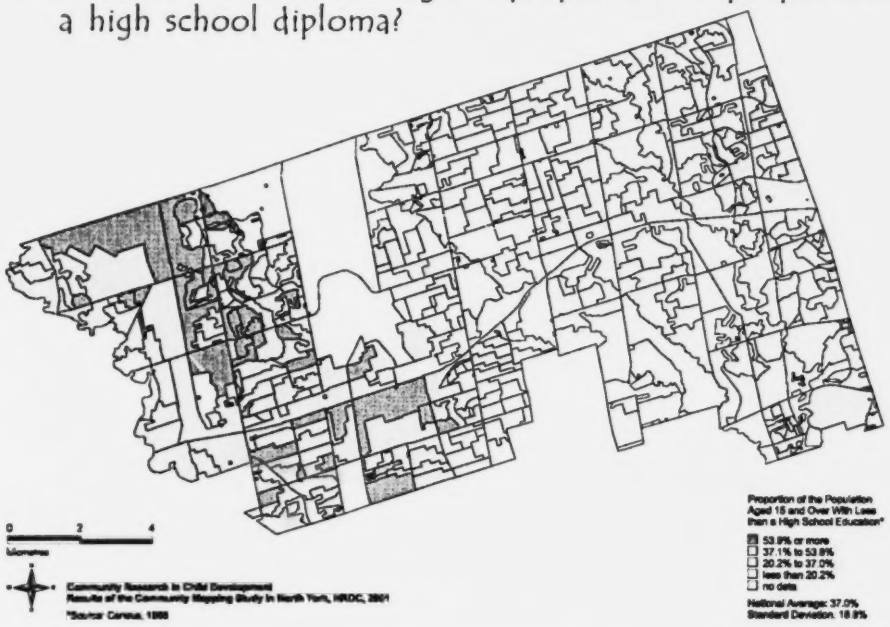
Map 4 – Which areas had the higest mobility?


0 2 4
kilometres
Community Research in Child Development
Results of the Community Mapping Study in North York, HRDC, 2001
*Source: Census, 1996
Proportion of the Population that Moved Within the Previous Year*
29.0% or more
18.0% to 28.9%
3.0% to 15.0%
less than 3.0%
no data
National Average: 18.0%
Standard Deviation: 13.0%

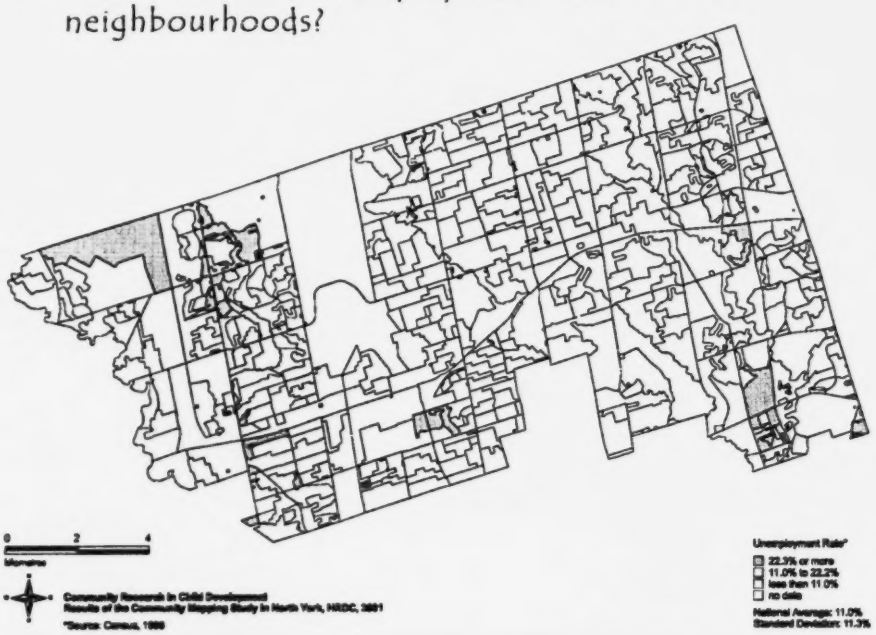
Map 5 – Which areas had the highest proportion of people with a post-secondary education?


0 2 4
kilometres
Community Research in Child Development
Results of the Community Mapping Study in North York, HRDC, 2001
*Source: Census, 1996
Proportion of the Population Aged 15 and Over With a Post-Secondary Education*
45% or more
30% to 44%
15% to 29%
less than 15%
no data

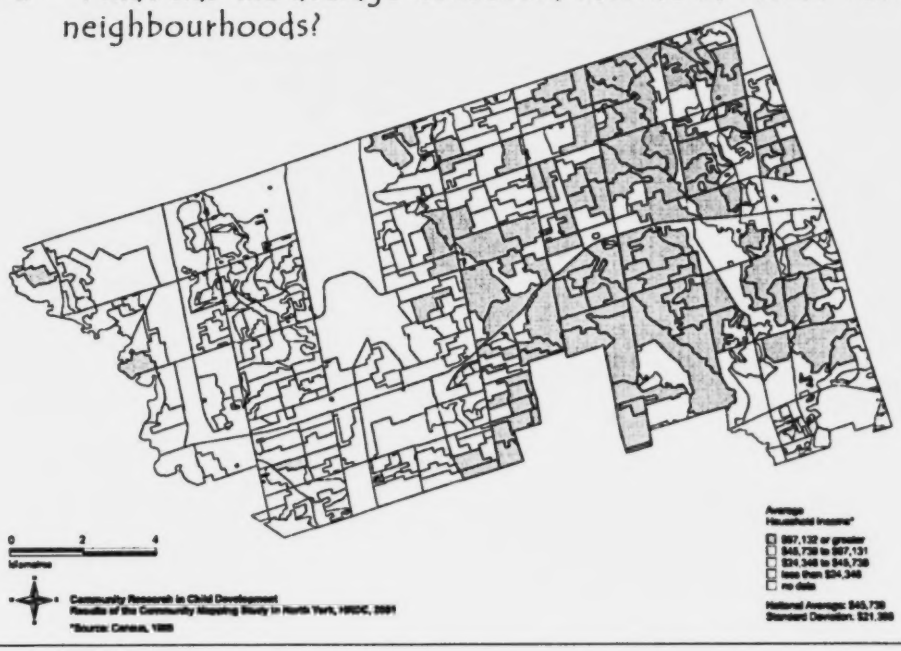
Map 6 – Which areas had the highest proportion of people without a high school diploma?


0 2 4
Kilometres
Community Research in Child Development
Results of the Community Mapping Study in North York, HRDC, 2001
*Source: Census, 1996
Proportion of the Population Aged 15 and Over With Less than a High School Education*
53.8% or more
37.1% to 53.8%
20.2% to 37.0%
less than 20.2%
no data
National Average: 37.0%
Standard Deviation: 16.8%

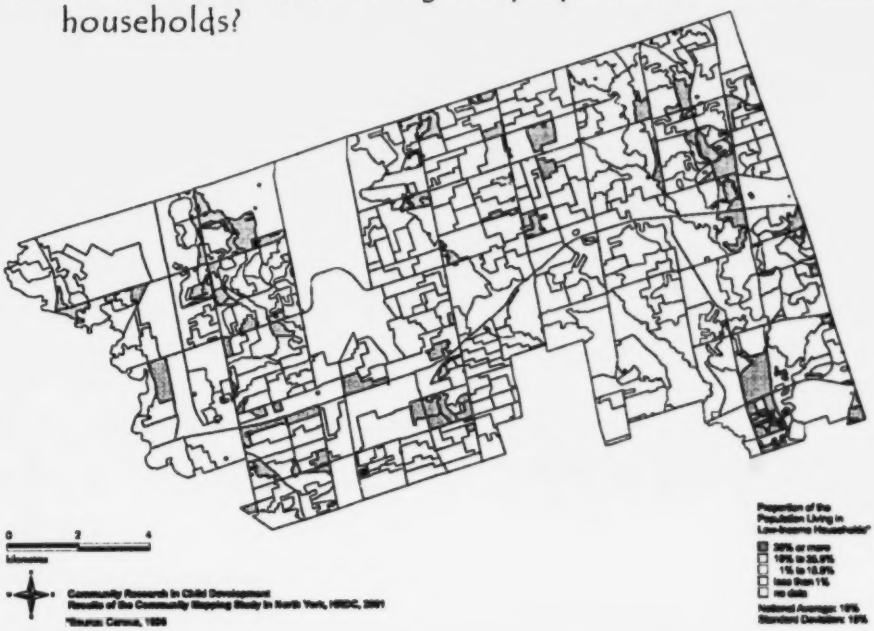
Map 7 – What were the unemployment rates of the neighbourhoods?



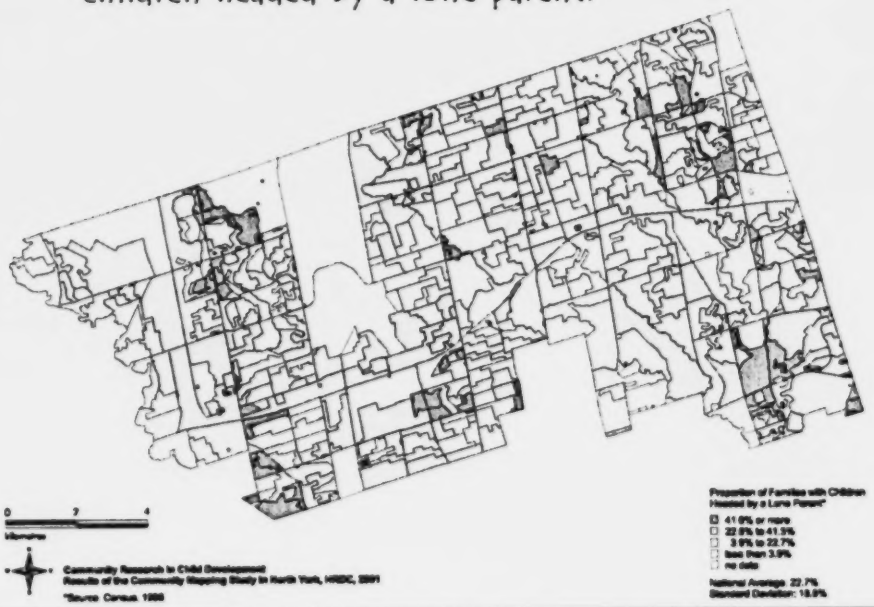
Map 8 – What was the average household income in North York neighbourhoods?



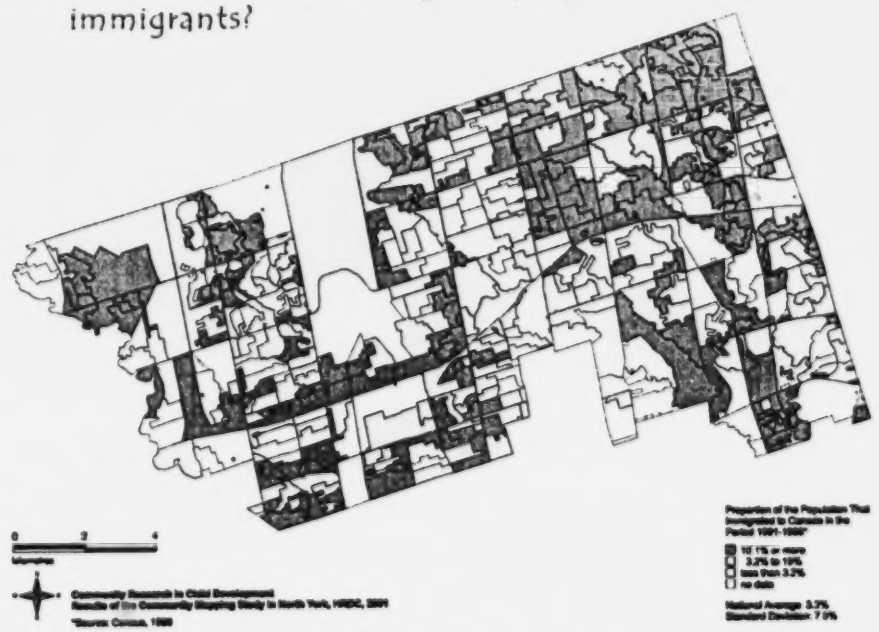
Map 9 – Which areas had the highest proportion of low-income households?



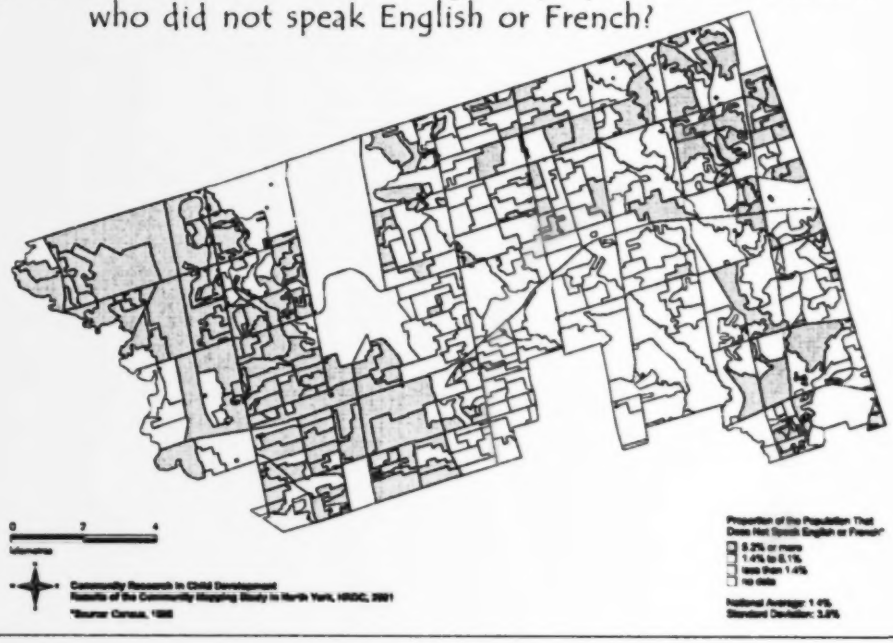
Map 10 – Which areas had the highest proportion of families with children headed by a lone parent?



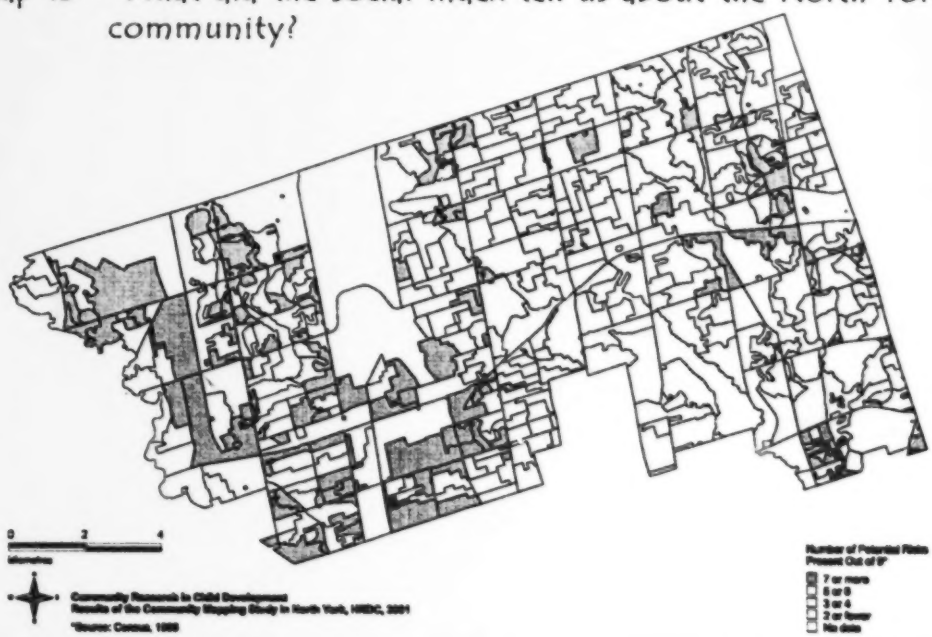
Map 11 – Which areas had the highest proportion of recent immigrants?



Map 12 – Which areas had the highest proportion of residents who did not speak English or French?



Map 13 – What did the Social Index tell us about the North York community?



4. The Physical Environment

In the research exploring community effects on children's development, the physical characteristics of neighbourhoods have received little attention. The quality of the physical environment in a community can, however, affect the health and well-being of families and children. Information on the quality of the physical environment was collected through neighbourhood observations.

The neighbourhood observations component of the Community Mapping Study was designed to assess the physical and infrastructure aspects of the community. Factors that may affect the development and behaviour of children, such as the quality of homes, street lighting conditions and traffic volume, and the presence and number of parks and amount of green space were rated.

This chapter will focus on three sets of observations: the traffic patterns, the presence of garbage or litter, and an overall rating on the physical environment scale. (Refer to Appendix D for a complete analysis of the results of the neighbourhood observations.)

Traffic patterns

How did traffic flow through North York?

Why ask this question?

A good road network and free-flowing traffic are essential for movement and access; however, if not well designed, it can have impacts on the lives of young children.

Injuries cause disruptions for children and their parents, as these injuries may require medical attention or time away from school. Greater exposure to traffic (as measured by the number of streets crossed on a child's way to and from school) has been positively correlated with injury rates in children. Traffic-related injuries have been reported to be higher for boys than girls (Macpherson, Roberts, & Pless, 1998).

Injuries, many of which may be caused by motor vehicle accidents, are one of the leading causes of death for children and youth across the country (Federal/Provincial and Territorial Advisory Committee on Population Health, 1999).

Crossing main streets or roads with high volumes of traffic can present a greater risk to children. Younger children have been reported to have higher rates of injury, even though exposure to traffic has been shown to be lower for younger children than for their older counterparts (Pless, Verreault, Arsenault, Frappier, & Stulinskas, 1987).

Injury rates are higher for children living in regions with lower socio-economic status.

Socio-economic status is also related to injury rates, with higher maternal education (12 years or more) being associated with less exposure of children to traffic and decreased rates of childhood injury (Pless, Verreault, Arsenault, Frappier, & Stulinskas, 1987). Paradoxically, low-density, single-family homes in the suburbs may require children to cross more streets, though these streets may have less traffic.

Map 14 - Where did children live in relation to traffic patterns in North York?

Traffic volume on neighbourhood roads was assessed by tracking the number of cars that passed by per minute.

In most areas, especially those with a high proportion of children, traffic volume was light. Almost three-quarters of the neighbourhoods had traffic patterns that were rated as light or very light.

Over 16% of the neighbourhoods were rated as heavy traffic areas. Clusters of neighbourhoods throughout the community were found to have both a high proportion of children and very heavy traffic volumes. These were mostly located in the western part of the community.

78.4% of the streets were standard two-lane roadways. The remainder consisted of either four or more lanes (18.6%) or one-lane roads (almost 3%).

Very few neighbourhoods (less than 5%) had streets with marked cross walks.

Stoplights were observed in almost one-quarter of the neighbourhoods (23.5%), although very few of these neighbourhoods had more than one stoplight.

Many of North York's children were clustered in close proximity to the Don Valley Parkway in the south and Jane Street in the west.

Traffic patterns and the Social Index

In North York, no clear pattern emerged when the distribution of traffic was examined in relation to the Social Index. In other words, areas with lower traffic volumes did not consistently have lower numbers of risk factors. However, some neighbourhoods did have both the highest volumes of traffic and the most risk factors; while other neighbourhoods had the lightest traffic volume and the fewest risk factors.

Litter

Map 15 depicts the presence of garbage, litter, or broken glass in the streets, on the sidewalks or in the yards of the neighbourhoods.

Map 15 - Which areas had the most litter present?

Garbage and litter were found in only a small proportion of the neighbourhoods.

Approximately two-thirds of the EAs had no signs of litter, garbage or broken glass. Most of the neighbourhoods in which little or no garbage was observed were also those with fewer proportions of children.

Putting it all together: Creating a Physical Environment Scale

Children's physical environments, including factors such as overcrowding and poor-quality housing, can have important impacts on their health and well-being. Children living in poorer environments for instance, are more likely to live in homes that are deteriorating or in need of major repairs (Ross, Scott, & Kelly, 1999).

Assessing the physical environments and characteristics of neighbourhoods is an aspect of community research that is often overlooked, partially because of the operational difficulties involved in collecting such information. A consolidated measure of the physical characteristics of

neighbourhoods, based on factors that have been postulated to impact on children's outcomes, can provide useful information for communities. A scale designed to assess the overall physical environment of North York was developed using the following items:

- conditions of the buildings;
- percentage of dwellings in need of repair;
- volume of traffic on the streets or roads;
- presence of garbage, litter, or broken glass;
- noise levels;
- number of stop lights observed; and
- number of lanes in the streets.

(Refer to Appendix E for a more detailed description of how the scale was developed.)

Map 16 - What was the overall physical condition of North York neighbourhoods?

The vast majority of neighbourhoods scored relatively well on the quality of their physical conditions. In fact, three-quarters of North York's neighbourhoods received a score or 12 or less on a scale with possible scores ranging from 6 to 24 (lower scores meant more positive characteristics).

Close to 100 neighbourhoods, however, were rated as having the least favourable conditions (refer to areas with dark blue shading). Many of these areas also contained high proportions of children and also had high numbers of potential socio-economic risk factors.

Two sections on the eastern side (at the northern and southern tips) scored very well on almost all of the items on the scale. These areas contained very few children and large amounts of parkland. A few similar areas can also be found scattered throughout the community.

In the northwestern section of the community, an area with a high density of children, there were clusters of neighbourhoods that scored much poorer on most items. This was one of a small number of areas within the city in which abandoned houses were observed (map not shown) and although parks existed in the area, most of their equipment was only in fair condition.

An additional pocket in the southern end of the city (south of Don Mills Road and Eglinton Avenue intersection), containing a high density of children, scored only in the moderate range on most of the physical environment items.

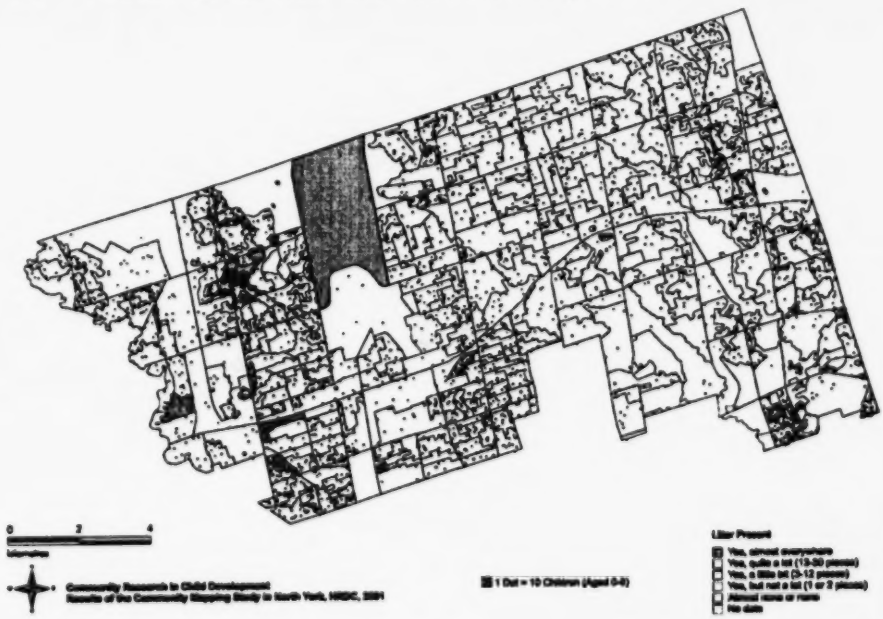
How can the community use this information?

- Most of North York appears to have good physical environments in which to raise children. However, problem spots may need to be assessed by the community for potential improvement. For example, where children need to cross roads to schools, pre-schools or play spaces, more cross-walks or stop lights could be added as required.
- The areas providing the least favourable conditions may require concentrated action to ensure improvements in housing quality and community services.

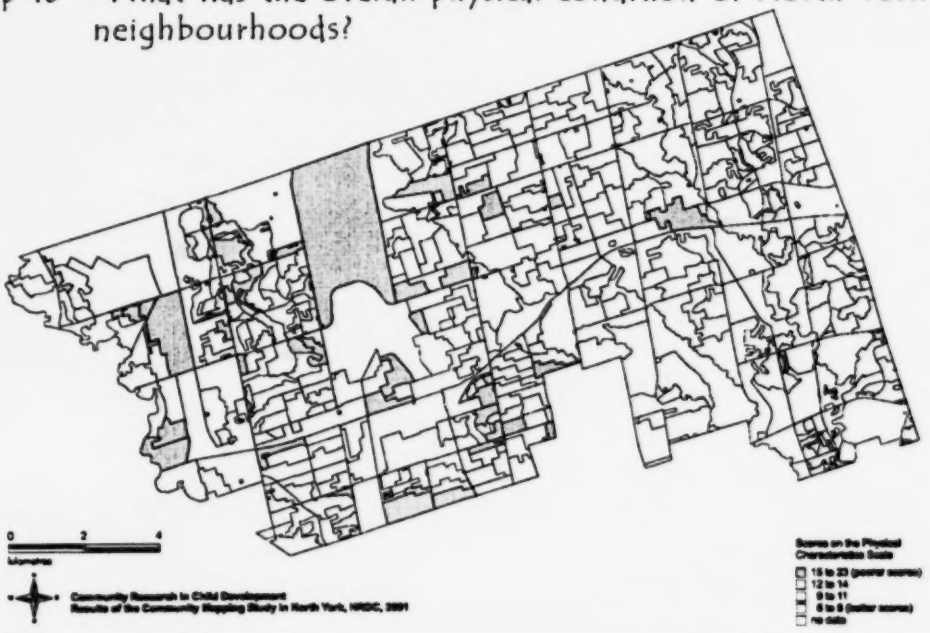
- Community programs, such as litter clean-up, flower boxes, and improved lighting have potential and such programs can include children. Broken windows, poor play equipment, and litter can be associated with anti-social behaviours such as graffiti and vandalism.

Map 14 – Where did children live in relation to traffic patterns in North York?

Map 15 – Which areas had the most litter present?



Map 16 – What was the overall physical condition of North York neighbourhoods?



5. Neighbourhood Resources

This chapter considers the distribution of resources in the neighbourhoods of North York and discusses the implications of these findings.

Theories based on neighbourhood resources view the community itself as a resource for human development. Resources in the neighbourhood support families and residents by complementing their efforts to raise their children well. By investigating the links between the quality and quantity of services available for children (such as police, parks, recreation, and health and social services) with the developmental outcomes of children (such as emotional and cognitive development), communities can evaluate the effectiveness of these resources and determine how best to distribute them.

Such theories imply that increased - as well as appropriate - availability of programs and services will lead to enrichment of experiences, more opportunities for development and social networks of support, and fewer chances of developing problems. Scarcity of resources, on the contrary, can result in reduced opportunities for enrichment, lack of supportive environments, and higher need for preventive and corrective action. The provision of services can be expensive and labour intensive, therefore it is essential to have the best mix and right coverage of services based on their impacts on families and children (See Jencks & Mayer, 1990, for a review of the theories of neighbourhood influence.)

A look at neighbourhood resources

How were services distributed in North York?

Why ask this question?

A community can help serve its residents by offering a range of programs and services to meet the needs of children. Programs can serve a variety of purposes. For example, they can be:

- recreational (e.g., community sports teams);
- educational experiences (e.g.,nursery schools); and
- an intervention when problems occur.

These programs may offer opportunities to increase one's quality of life through a learning or recreational experience, while at the same time increasing social networks through participation.

Five program categories that are important for child development outcomes were examined.

1. Education;
2. Societal (e.g., programs for special needs children);
3. Health services;
4. Sports and recreation;
5. Entertainment and culture.

Community researchers in North York first created an inventory of programs,* then contacted a sample of agencies offering programs throughout the city to collect information about: the types of services they offered; the intended recipients; barriers to participation; and areas of concern. (Refer to Appendix F for a detailed description of the design and results of the community program survey). The maps created for this chapter of

* This inventory represents a first step by the community to understand the resources it has available. The database should be updated on a regular basis to ensure its completeness.

the report are based on the inventory of programs and services that was developed. Resources were mapped according to their classification by the community's researchers.

Educational resources

Three potential types of educational resources can support children's development. They are:

- resources targeted directly to children (such as Early Childhood Educational Programs (ECEP) and kindergartens);
- resources targeted to parents or families (such as parenting programs, parent relief programs or family support programs); and
- community-based resources available to all residents (such as libraries, literacy centres, and English as a Second Language (ESL) programs).

A child's readiness to learn at entry to formal schooling is an important indicator of his or her future academic and social success, which in turn can influence his or her life-long prospects for employment and financial security. Educational programs for young children that enhance their physical, social, emotional and cognitive development help provide the foundation for later learning.*

Early-childhood educational programs and kindergartens

For some children, attendance at ECEP may be their first exposure to a structured learning environment. For the purpose of this report, ECEP are defined as learning-focused play centres that offer children, sometimes with their parents, the opportunity for play-based learning. These programs vary in their fee policies (some programs charge fees; some fee-based programs are subsidized; and some programs operate as cooperatives, where fees are reduced or eliminated as a result of parental volunteering). Examples include nursery schools, pre-schools, and early learning centres.

Kindergarten programs in Ontario, providing children with their first experience in the school system, offer a variety of learning activities in a structured environment. The province of Ontario offers both junior and senior kindergarten and a child can enter the kindergarten program at age four. The program typically operates during 50% of the school week.

Participation in learning-based pre-school programs can lead to achievement gains and, in some cases, gains in self-esteem, motivation and social behaviour (Westchester Institute For Human Services, 2000). Kindergarten programs also have the potential to increase a child's readiness for learning, thereby enhancing his or her lifelong academic and personal development. However, in order for these programs to be effective in helping children achieve their optimal potential, they need to be developmentally appropriate and responsive to the experiences, backgrounds and needs of the students (Doherty, 1997).

Map 17 - In which areas did children and families have the greatest access to early childhood educational resources?

Approximately 52 ECEP were found in North York, located almost exclusively in the eastern portion of the city. These same neighbourhoods contained a lower density of children than in other portions of the city and tended to be areas where residents

*Doherty, 1997

with higher incomes and education levels lived. Fewer ECEP were found on the westernmost portion of the city; the area of the city where the density of children was much higher, and the levels of income and education were lower. Many of the ECEP were located in neighbourhoods with less than five risk characteristics.

Approximately 90 kindergartens were located in North York, primarily clustered around neighbourhoods with a high density of children in the western and eastern portions of the city.

Because kindergarten is part of the public school system in Ontario, the availability of this resource is directly related to the need, based on the number of children in an area. Therefore, the availability and location of kindergartens in North York showed a distinctively different pattern than the availability and location of ECEP. For example, kindergartens were found in neighbourhoods with a variety of characteristics, such as areas with both:

- high and low income levels of residents;
- high and low levels of education of residents; and
- the presence of few or many risk characteristics.

Parent and family focused educational resources

Resources that support families can include:

- *family support centres* (including family resource centres, support groups for teen mothers, and mothers' networking groups);
- *parent relief programs* (provides a safe place for parents to drop off their children for a few hours). One of the programs offering this service is the Better Beginnings Program; and
- *parenting classes and programs* (including parenting programs for parents of young children, mom and tot programs, and parenting programs focusing on all stages of child development).

Positive parenting practices have been related to increased pro-social behaviours in children and a decreased likelihood of behavioural problems (Chao & Willms, 1998). The literature also suggests that parenting and life skills training for adults can serve as a protective factor to decrease a child's risk for problems (Harachi, Catalano, & Hawkins, 1997).

Map 18 - Which areas had the greatest access to parenting programs and family resources?

North York had 17 family support centres, 5 parent relief programs, and 45 parenting classes and programs:

The family support centres were distributed in three main locations in the community; the west; the north; and the centre. The family support centres in the west and the north were mostly in areas of five or more risk factors. The proportion of recent immigrants in the areas of the northern family support centres was also high.

While parent or family relief programs were located in proximity to neighbourhoods with five or more risk factors, there were none in the western portion of the community that included far more high-risk areas (five or more risk factors).

The eastern, western, and southern borders did not have family support centres.

Four out of the five parent relief programs were located in the northeastern portion of the city, and the fifth parent relief program was located in the southeastern portion of the city.

The parenting programs and classes were equally distributed throughout North York serving areas with a wide range of socio-demographic characteristics and risk factors.

Community-focused educational resources

Research suggests that children growing up in families where the parents have low literacy skills are more likely to have problems in reading as well as in mathematics. When low literacy skills are coupled with other indicators of disadvantage such as lower parental educational attainment, and lower family income, the negative relationship with child outcomes is even stronger (National Institute of Adult Education: Adult Literacy and Basic Skills Unit, 1993). Studies have also shown positive gains for adults who participate in literacy programs (e.g., further education, higher income, employment gains, and increased interest in their child's schooling (Beder, 1999).

Map 19 - Which areas had the greatest access to libraries, literacy and ESL programs?

North York had 19 libraries and 25 literacy programs.

Libraries and literacy programs were often clustered on both the eastern and the western margins of the city.

Libraries were found in areas where the density of children was high, and in areas with high and low levels of risk factors.

Literacy programs were often located in relative proximity to a library.

The literacy programs located in the western part of the community were most often found in areas with high numbers of risk factors (five or more risk factors), in contrast to the literacy programs in the eastern portion of the city, which were often found in lower risk areas.

Societal resources

Services for children at risk and children with special needs

Many children may experience multiple risk factors in their lives such as low income status, negative parenting practices, parental separation, or abuse. These children may grow up to experience problems such as poor health, emotional or behavioural problems, and difficulties in learning. In order to enhance children's capacity for successful development, accessible and effective programs and services need to be available for children and their families living in high-risk circumstances.

Map 20 - Where were programs for children at risk and children with special needs located?

22 different services and programs were available for children at risk and their families, such as Better Beginnings Now, Community Action Program for Children (CAPC) and Head Start.

- 12 of these programs were clustered in the northeastern region of North York near a relatively poor area of the

community with somewhat high child density.

- In the westernmost side of North York as well as in the southeast corner of the city - areas of high-risk characteristics and a high density of children - there were few of these resources for children.

35 resources for children with special needs were present in North York. These programs included speech and language therapy, hearing clinics and programs for children with learning disabilities.

- These resources were often located near hospitals or health clinics that were often located further away from areas with a high density of children.

- A lack of these resources was noted in high-risk areas where the population could face challenges associated with poverty.

Social housing

Access to affordable, safe and quality housing is one of the most fundamental needs common to all Canadians. At the same time, many families face difficulties in finding such housing, especially when they spend an increasing proportion of their income on shelter. Guidelines set out by the Canada Mortgage and Housing Corporation note that a family has experienced a housing affordability problem when one-third or more of their household income is spent on shelter costs. In 1996, approximately 30% of all Canadian families renting their home spent one-third or more of their income on housing, with this burden falling heaviest upon young families and those headed by lone-parents (Canadian Council on Social Development, 1998). This trend has increased over the past decade, particularly among lone-parents.

With one-third of renting families in Canada over-burdened with shelter costs, the availability of community social housing is key to addressing the fundamental need of families for affordable, safe and quality housing.

Map 21 - Where were social housing units located in North York?

In North York there were approximately 82 social housing developments, containing nearly 15,500 units. The largest provider of social housing was the Metro Toronto Housing Authority, providing close to half of all units in the community. Other groups that provided housing assistance included ethnic or cultural affiliated groups, municipalities, and cooperative not-for-profit organizations.

The neighbourhoods in which social housing developments were located included a wide range of social characteristics:

- A greater proportion of people living in EAs containing social housing units had low incomes, as compared with North York overall (35% as compared to 26%, respectively).

- Generally, social housing units were located in neighbourhoods with high numbers of potential risk factors (often five or more).

- Approximately 7,000 children (13%) aged six years and under either lived in neighbourhoods with social housing developments, or within social housing developments.

Multicultural resources

As previously noted, one of the principal distinguishing characteristics of North York, making it unique among Canadian communities - was its degree of ethnic and cultural diversity.

- Compared to the Canadian population, where 17% were immigrants, 51% of the population in North York was of immigrant origin.

Map 22 - Did people in high-immigrant areas have access to multicultural and immigrant services?

While diversity provides excellent opportunities for cultural learning and growth, it can also create new and greater challenges than those faced by other, more homogeneous communities. An effective strategy to address these challenges includes providing an adequate and accessible service network for immigrant families and their children.

North York had 38 locations where multicultural and immigrant services were available. These services, located in areas with diverse ethnic populations, included such programs as ESL, citizenship classes, and women's groups.

Of the 38 services, 20 of them were located in EAs with an immigrant population of over 50% of the total.

Over half of the 795 EAs in North York had 50% or more residents who were immigrants. Two-thirds of children aged six and under in North York lived in such ethnically diverse EAs.

Community centres for the benefit of all residents

Community services, such as community centres, are beneficial to all residents, including new Canadians. Programs based in community centres provide an important opportunity for children to learn social and other skills through interaction with their peers, through instruction or mentoring by adults. Almost two-thirds of all children and 80% of low income children rarely participate in clubs or group programs such as those offered at community centres (Ross & Roberts, 2000). Barriers to accessing community centres, such as cost and transportation, may be responsible for their lower rates of use.

Map 23 - Where were community, recreation and neighbourhood centres located?

North York had a network of close to 33 community centres for the use and benefit of its 589,653 residents.

While the number of community centres in North York was relatively high, these centres were not always located in areas with large numbers of families and children.

- 24 of the 33 community centres were located in EAs with fewer than 100 children, leaving only 9 centres in those EAs with more children.
- Most centres, however, were located near areas with high numbers of children.
- Exceptions were found in the south-central region and southwest corner of the community, where community centres were not located in or in adjoining areas with high numbers of children.

Health services

Doctors and specialist physicians

Are there relationships among the distribution of physicians and the characteristics of a community? A recent study (Krishnan, 1997) found that the distribution of physicians and specialists depended on certain socio-demographic factors within communities.

- Family physicians or general practitioners were most likely to be found in metropolitan areas with a high percentage of residents who were highly educated.
- Family physicians or general practitioners were less likely to be located in areas with a high proportion of the population under age five.
- Specialist physicians were more likely to be found in large population areas with a higher percentage of university-educated residents and were more likely to be found in areas with a lower percentage of children and of owner-occupied dwellings (Krishnan, 1997).

Map 24 - In which areas did residents have the greatest access to doctors?

In North York, the physicians tended to be concentrated in and around areas with fewer risk factors (particularly in the central portion of the community).

Although the concentration of health practitioners was more dense in the eastern and central areas of the community – both in areas where the density of children was high and low – no neighbourhood appeared to be at a great disadvantage in terms of physician accessibility. Almost everyone in North York had some type of physician available within a two-kilometre radius.

Emergency health services – hospitals and ambulance stations

Does the number of hospitals or ambulances in the community have an impact on the health of its residents? More research is needed to help determine the impact of the distribution of health care services in the community on utilization rates and overall population health.

Map 25 - Where were emergency health services located in North York?

The concentration of hospitals was higher on the eastern side of North York than elsewhere, parallel to the distribution pattern of physicians.

Seven out of the eight ambulance stations were located in the northern region of the city, with most of them on the eastern side.

- Despite the presence of several hospitals, the southeastern area of North York – where there were pockets of high-density neighbourhoods - had no ambulance station in close proximity (there could be stations located in areas adjoining North York).
- There was no hospital in the southwestern area of the community but there was an ambulance station.
- The neighbourhoods containing hospitals and ambulance stations seemed to include a range of socio-economic characteristics.

Overall, acute care services in North York did not appear to be as evenly distributed as primary physicians.

Nutrition and health promotion programs, counselling programs or centres

Nutrition and health promotion programs

The pre-school years represent an important stage of development for children. Thus, issues of food security, adequate nutrition and hunger are of great consequence for children in the pre-school age range (Hay, 2000).

Past research has shown that nutrition programs have improved outcomes for children. Implementation of prenatal nutritional counselling, motivation training and food supplement program called the Montreal Diet Dispensary for high-risk pregnant women has "resulted in significant increases in mean birth weights compared with high-risk women not enrolled" (Steinhauer, 1998). As well, Vancouver's Healthiest Babies Possible, an outreach program which targets women at risk of having low-birth weight babies has seen positive results. Participation in the program resulted in behavioural changes among the mothers (i.e., quitting smoking) and higher birth weights for the infants. The program was multifaceted and addressed issues such as nutrition and lifestyle choice, and provided access and referrals to group support meetings, health and other agencies (National Council of Welfare, 1997).

Counselling programs or centres

Counselling and mental health services can be beneficial to all members of the community as preventive and corrective measures. A recent study in the U.S., for instance, found that the availability of community-based services has been associated with decreased rates of hospitalization services for children with emotional disturbances (McNulty, Evans, & Grosser, 1996).

Map 26 - In which areas were preventive health services located?

59 nutrition and health promotion programs were found in North York.

Nutrition and health promotion programs were located on both the east and west sides of the city. The southeast portion of the city had fewer of these resources than any other region of the city. In the west, these programs were located in both its northern and southern areas. On the east side of the community, these programs were mainly located in its northern areas.

In general, the nutrition and health promotion programs were found in areas with at least three or four risk characteristics, and were highly concentrated in areas with even higher numbers of risk factors.

Counselling services in North York were comprised of a diverse group of providers, including ethnic or religious groups, and municipal or other community-service agencies. These organizations provided individual and family counselling, as well as treatment and intervention programs in neighbourhoods throughout the community.

Counselling programs were located in both the western and northeastern portions of the city.

Counselling programs in the west were most often located in neighbourhoods with at least five risk characteristics.

Sports and recreational facilities, parks and playgrounds

Ensuring that recreational opportunities are available and affordable is important to a growing child's physical and emotional health, psychosocial skills and improved self-esteem (CCSD, 1998). Children's participation in supervised and unsupervised sports and arts-oriented activities is associated with increased psychosocial development. The presence of good parks and play spaces in children's neighbourhoods has been linked to increased participation rates in supervised and unsupervised sports and arts activities. Children living in more civic neighbourhoods (characterized by factors such as helpful neighbours, safe environments, and the presence of good role models) were more likely to have participated in sports-related activities (Offord, Lipman, & Duku, 1998). As well, a recent study on involvement in sports found that active parents tend to have active children and that families with higher incomes were more likely to have children involved in sports as compared to families with lower incomes (Kremarik, 2000).

Not only is the presence of an outdoor play space important, but the kind and amount of vegetation in the play area (often measured by the number of trees and amount of green space or grass) also makes a difference. Studies have found that adults are more likely to use, and children are more likely to play in, areas of higher vegetation. Nearly twice as many children were observed playing in areas with many trees than were observed in areas with few trees (Coley, Kuo, & Sullivan, 1997; Taylor, Wiley, Kuo, & Sullivan, 1998); and more creative forms of play occur in areas with greater vegetation (Taylor, Wiley, Kuo, & Sullivan, 1998).

Map 27 - Where were sports and recreation facilities, parks and playgrounds located?

Sports facilities seemed to be relatively well distributed in North York, except on the western border of the city and in various pockets in the northeast.

Although the neighbourhoods along the western border, which had high densities of children, lacked formal sports and recreational facilities, they did have access to green space.

Entertainment and cultural resources

Participation in the arts exposes children to history and culture through a wide range of experiences, and has been positively associated with the presence of good parks, playgrounds and play spaces within a neighbourhood. Dr. Graham Chance, past chair of the Canadian Institute of Child Health, advocated that enrichment in music, the arts and recreation are vital to the development of the emotional and spiritual well-being of children (Campbell, 2000).

Factors that can be linked to increased participation in extra-curricular arts and cultural activities include both family characteristics, such as income level, and community characteristics (such as the availability of resources). Research demonstrates that children from lower income families participate far less – in fact 26% less – than their higher income counterparts. Children from higher income families have higher participation rates, perhaps because of the cost of equipment, lessons, and the programs themselves (Ross & Roberts, 2000). This discrepancy among income groups in children's participation rates in the arts shows a missed opportunity to improve developmental outcomes.

The majority of entertainment and cultural facilities tended to be located in neighbourhoods with the fewest number of children (each with a child population between 5 and 59). These neighbourhoods also had residents with higher levels of income and education.

Arts and cultural facilities

Map 28 - Where were arts and cultural facilities located?

There were approximately 17 galleries, museums, or cultural centres and 15 theatres and performance spaces in North York, located almost exclusively in the eastern part of the city. The remainder of the entertainment and cultural resources were located on the northwestern side, bordering on an industrial portion of the city.

There was one large central cluster of resources; use of these by the full community, however, would likely depend on both availability of transportation and costs.

Children who participated in the arts were about 30% less likely to have one or more of the following problems: impaired social relationships, grade repetition, emotional or behavioural disorders.*

Putting it all together: Creating a Resource Availability Index

According to theories of neighbourhood resources, increased availability of key resources for children and families create a more positive, enriched environment for child development. An enriched environment, with greater opportunities for learning and development, can lead to better overall child outcomes. In addition to viewing these key community resources individually, it is helpful to look at the distribution of multiple services, enabling a more global picture of resource availability in the community. To measure multiple resource availability, and to help differentiate high-resource areas from low-resource areas, a "Resource Availability Index" was created. This index uses Census Tract Boundaries rather than EAs to define the geographic areas (refer to Appendix G for more information on the development of this index).

Map 29 - What was the overall resource availability in North York?

Of the 111 Census Tracts in North York, 55 of them were classified as "somewhat high resource areas" or "high resource areas." These 55 Census Tracts contained nearly half of all North York children aged six years and younger.

While many children lived in relatively high-resource areas, about 26,700 (over 50% of children aged six and younger) lived in one of the 56 relatively resource-poor Census Tracts in North York. These 56 Census Tracts contained less than half of the 19 key resources identified in the Resource Availability Index.

Clusters of high-resource Census Tracts were disproportionately represented in the eastern region of North York, a region with relatively few children. This pattern points out an apparent discrepancy between the distribution of resources in North York and the location of families with young children who might need them.

*Offord, Lipman, & Duku (1998).

Other areas with relatively few resources were scattered throughout the community. These areas were often located adjacent to Census Tracts with abundant resources, ensuring a fair degree of accessibility even with a less-than-ideal distribution of key community resources.

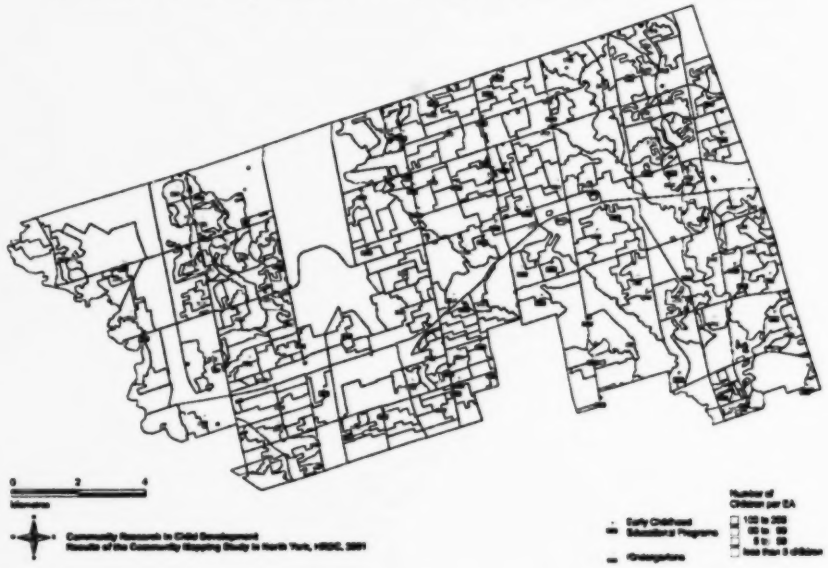
How can the community use this information?

- While North York has a good supply of services for its residents, improvements could be achieved by better distribution, a best mix of services to respond to the specific character of neighbourhoods, and targeting of remedial or compensatory services.

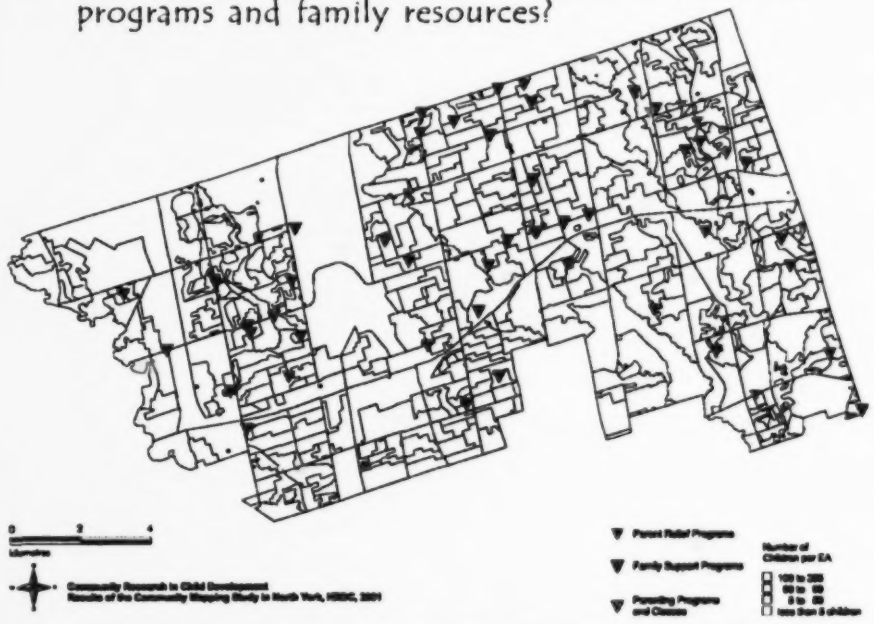
- Efficiencies can be gained by matching demand and rates of utilization to supply of services, but will require ongoing monitoring.

- Sports/recreation, culture and arts, as well as contingency services could be improved in some areas, where high numbers of children aged six and younger live. Such improvements may require action by several organizations and agencies.

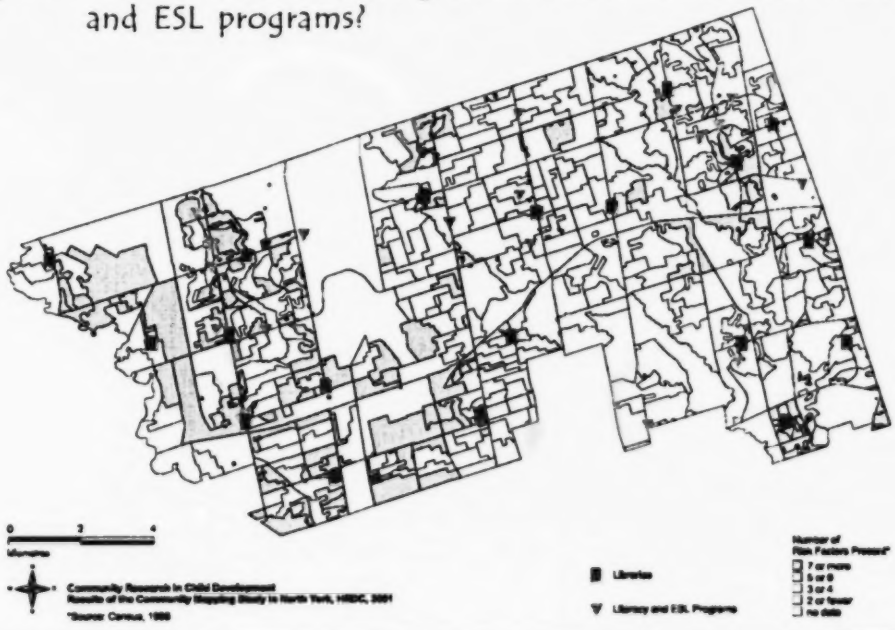
Map 17 – In which areas did children and families have the greatest access to early childhood educational resources?



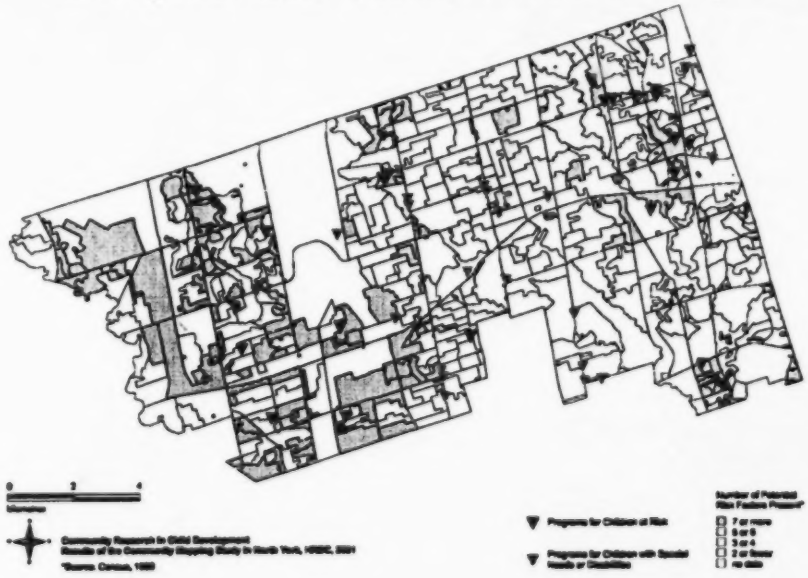
Map 18 – Which areas had the greatest access to parenting programs and family resources?



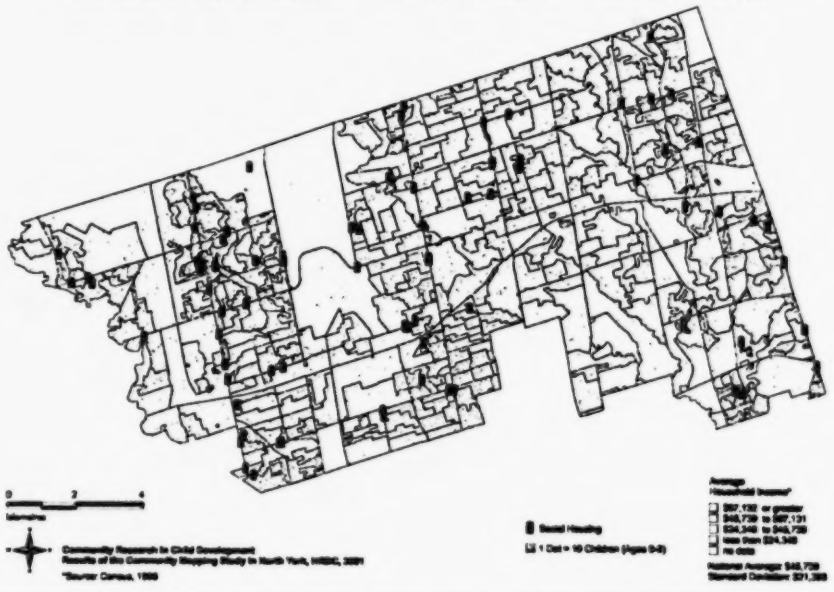
Map 19 – Which areas had the greatest access to libraries, literacy and ESL programs?



Map 20 – Where were programs for children at risk and children with special needs located in relation to high-risk areas?

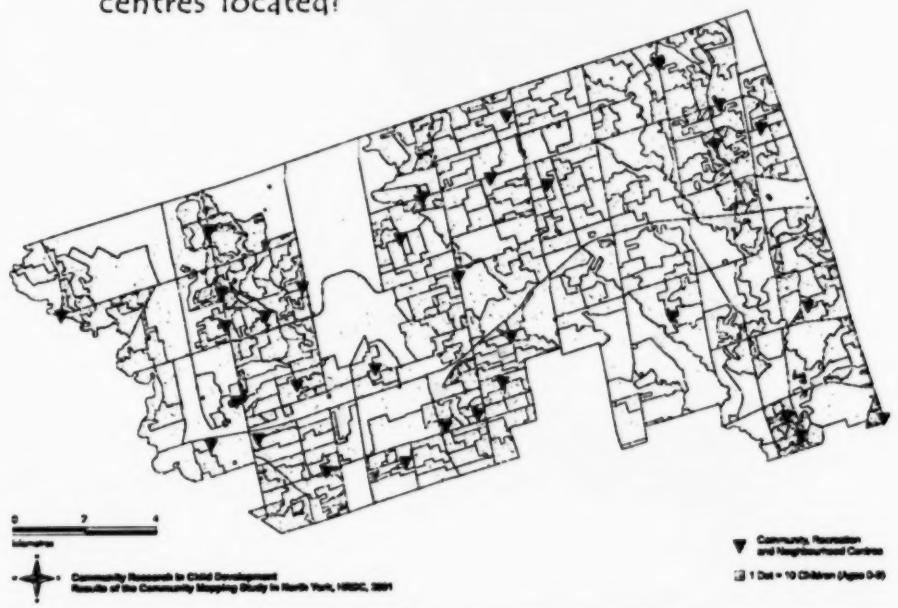


Map 21 – Where were social housing units located in relation to household income* of families in North York?

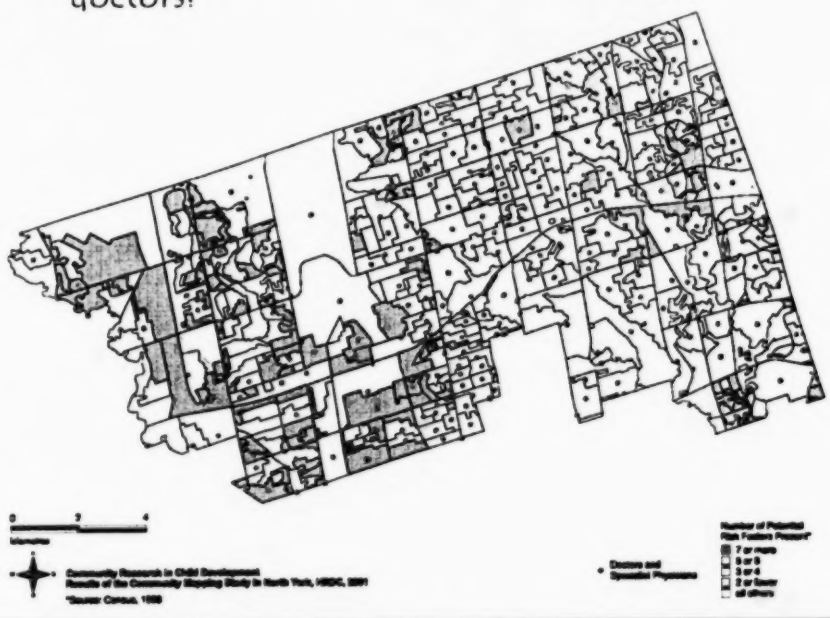


Map 22 – Did people in high-immigrant areas have access to multicultural and immigrant services?

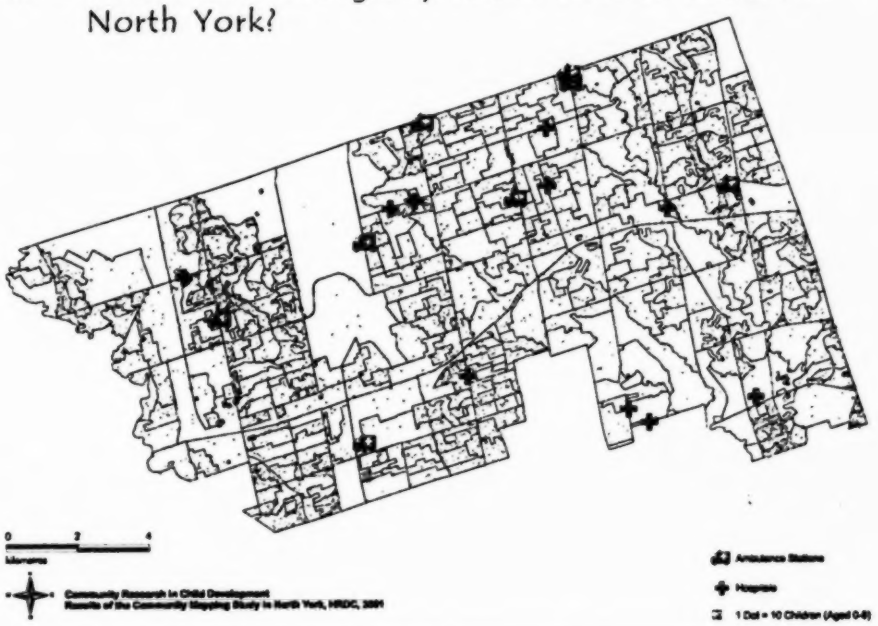
Map 23 – Where were community, recreation and neighbourhood centres located?



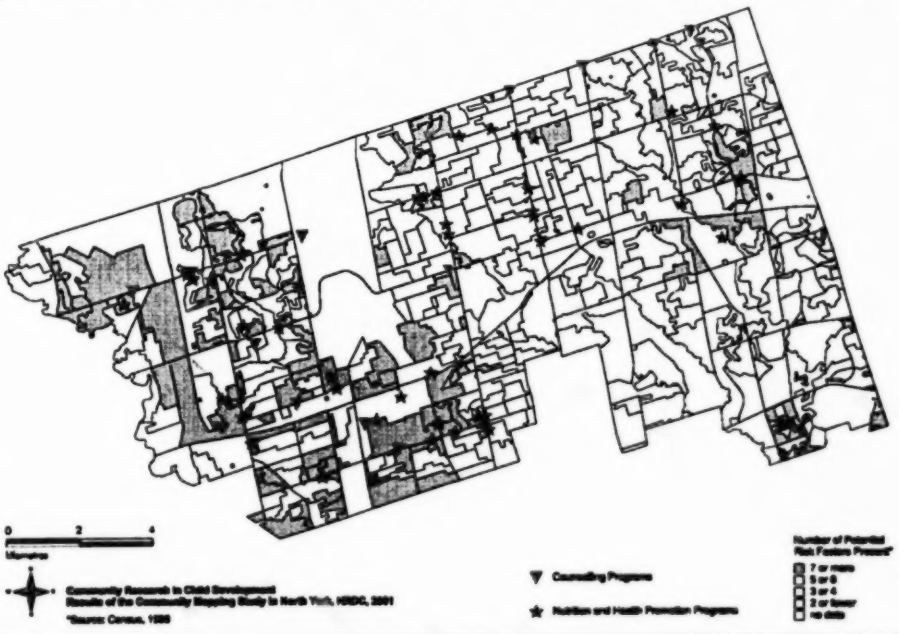
Map 24 – In which areas did residents have the greatest access to doctors?



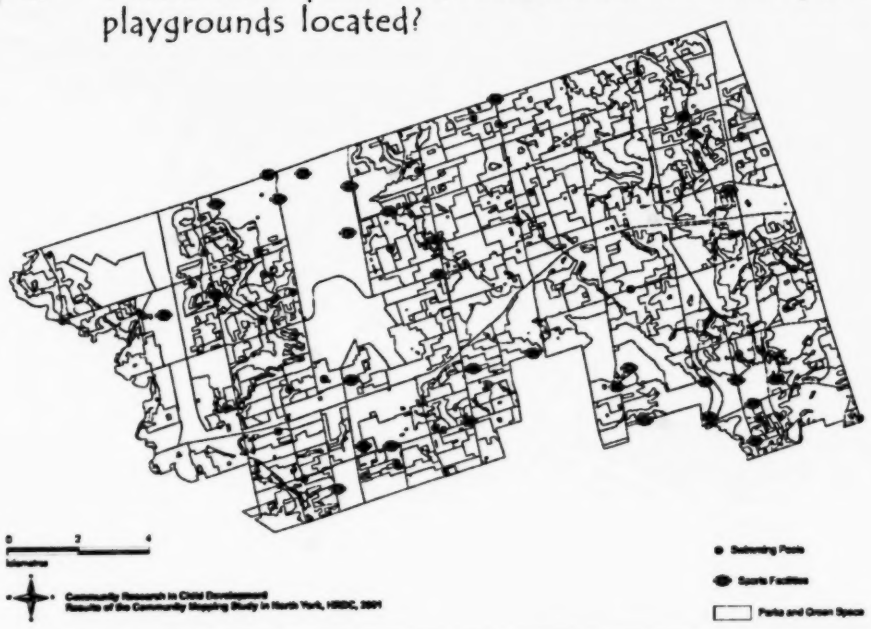
Map 25 – Where were emergency health services located in North York?



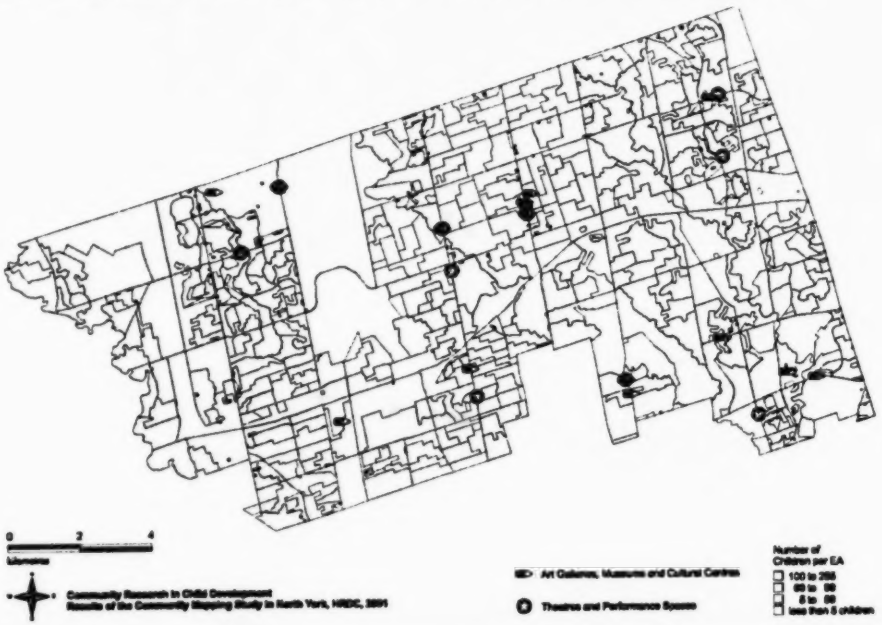
Map 26 – In which areas were preventive health services located?



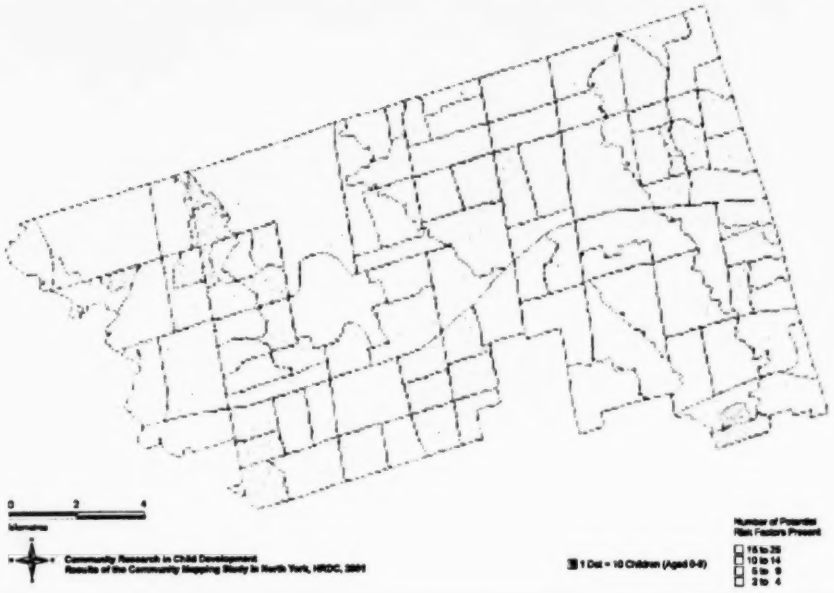
Map 27 – Where were sports and recreational facilities, parks and playgrounds located?



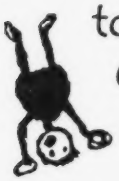
Map 28 – Where were arts and cultural facilities located?



Map 29 – What was the overall resource availability in North York?



6. Using the Research to Inform Community Action



This chapter summarizes some of the key findings emerging from the Community Mapping Study- findings selected because they point to potential areas of need, gaps in services, or unbalanced patterns of resource distribution. Along with the data from the Early Development Instrument and the NLSCY-Community Study, the synthesis of this information provides new evidence to help guide the development of community strategies to improve child outcomes.

The study of community resources in North York, including the collection of information on its neighbourhoods' physical and socio-economic environments, provides a basis for community-wide discussions on developing strategies to improve child development outcomes. These strategies can use evidence-based decision-making; for example related to the allocation of resources for optimal early child development within the community, according to specific needs of each area.

Findings related to the social environment

A child's social interaction with other people can have an important influence on his or her development. In addition, childhood is a critical stage of development where good or poor socio-economic circumstances have lasting effects.

Mother's education is a particularly strong predictor of children's behavioural and learning outcomes. As well, children with behaviour or learning problems are more likely to be from low income families (McCain & Mustard, 1999; Ross & Roberts, 2000; Willms, in press).

A snapshot of North York's social environment

- North York is an area with many families with children. Those EAs with few children tended to be sparsely populated industrial areas.
- North York is a community made up of largely residential areas, with several large industrial zones primarily located in the northwest region. Green space, parks, play and recreational areas were distributed throughout the city.
- Children between the ages of zero and six were particularly concentrated in neighbourhoods along Jane Street and in the southeastern neighbourhoods of the city.
- There were 60 EAs in North York with high mobility (29% or more people in the area have moved within the past year). These EAs had an average individual poverty rate of 40% and about half of their population (46%) was comprised of families with children.
- 12 % of children lived in areas with a high proportion of individuals (above or equal to 54%) who did not have a high school diploma. These areas also contained high average unemployment rates (18%) and average individual poverty rates of 42%.
- There were a few isolated areas in the community with high unemployment (greater than 22%), located mainly in the northwest and southeast regions of North York. These areas were also marked by other forms of social disadvantage, such as

a proportion of individuals without a high school diploma and a high individual poverty rate, compared to the national average.

- A significant number of neighbourhoods (224 EAs) had a high individual poverty rate (36% or greater). Although North York is relatively affluent in relation to Canada as a whole, over one-third of North York children aged six and younger resided in these low income neighbourhoods. As well, there were pockets of low income neighbourhoods near more affluent neighbourhoods, possibly creating a challenge for resource distribution.

- One of the characteristics of North York, making it unique among Canadian communities, is its high degree of cultural diversity. With an immigrant population of approximately 51% – three times the national average – 48% of North York's population had a mother tongue that is not one of Canada's official languages. Although neighbourhoods with a large number of immigrants were spread throughout the city, there were clusters of neighbourhoods with a high immigrant population concentrated on the northeast section of the community and in other areas.

Putting it all together: An overview of North York's social environment

The Social Index is a tool designed to provide a comprehensive profile of the level of socio-economic risk factors in communities. The data in the following table are also found in Chapter 2. They are provided here, as a helpful summary of the results from the Social Index.

- Approximately 67% of children aged six and younger in North York lived in EAs considered to be in "Somewhat high" or "High" risk, as compared to 33% of children aged six and under living in lower risk neighbourhoods.

- Over 23,000 children six and under lived in high risk neighbourhoods (7 or more risk factors).

- The "High risk" and "Somewhat high risk" neighbourhoods were mainly located in the western section of North York, along with scattered pockets of these neighbourhoods located in the northcentral and eastern sections of the community. These neighbourhoods tended to have higher percentages of people with low incomes and with lower levels of education. They also have higher proportions of immigrants in their population and higher percentages

Table 2 – Snapshot of the Social Index findings

	Risk potential of neighbourhoods			
	Low (0 to 2 challenges)	Somewhat low (3 to 4 challenges)	Somewhat high (5 to 6 challenges)	High (7 or more challenges)
Number of EAs	125	171	183	256
Percent of EAs	17.0%	23.3%	24.9%	34.8%
Number of children aged 0-6	7,360	10,105	12,605	23,350
Percent of children aged 0-6	13.8%	18.9%	23.6%	43.7%
Individual poverty rate	8.9%	15.8%	27.8%	46.7%

of individuals who could speak neither English nor French.

Findings related to the physical environment

Injuries, many of which may be caused by motor vehicle accidents, are one of the leading causes of death for children and youth across the country (Federal/Provincial and Territorial Advisory Committee on Population Health, 1999).

Crossing main streets or busy roads can present a greater risk to children. Younger children have been reported to have higher rates of injury, even though exposure to traffic has been shown to be lower for younger children than for their older counterparts (Pless, Verreault, Arsenault, Frappier, & Stulinskas, 1987).

Children's physical environments, including factors such as overcrowding and poor-quality housing, can have important impacts on their health and well-being. Children living in poorer environments, for instance, are more likely to live in homes that are not well maintained or are in need of major repairs (Ross, Scott, & Kelly, 1999).

North York's physical environment: Key findings

- Over 16% of the neighbourhoods were rated as heavy traffic areas.
- Just over 12% of the sampled neighbourhoods were rated as having "quite a lot of garbage" or "garbage everywhere."

Putting it all together: The neighbourhood physical environment score

In general, results indicated that the vast majority of neighbourhoods in North York scored relatively well in terms of the quality of their physical conditions. However, close to 100 neighbourhoods were rated as having the least favourable conditions. Significantly, many of these areas had a high proportion of children aged six years and younger. In the northwestern section, most of the park equipment was found to be in only fair condition.

Findings related to neighbourhood resource availability

Theories of neighbourhood resource availability view the community as a resource for human development. Such theories imply that increased availability of programs and services will lead to enrichment of experiences, more opportunities for development and support of social networks, and fewer chances of developing problems.

- Kindergartens and early childhood education programs – ECEP were located almost exclusively in the eastern portion of the city and in neighbourhoods with less than five risk characteristics. Higher-risk areas were less well served. On the other hand, kindergartens appear to be located wherever the need for them was present, regardless of neighbourhood characteristics.
- Family resources - There were no parent or family relief programs in the western portion of the community, an area that contained a large proportion of multiple problems.

- Programs for children at risk - In the western-most half of North York - an area with both high numbers of risk characteristics and a high density of children – there was a relative lack of resources for children at risk or with special needs.

- Community centres – These were often located in or in proximity to areas with high numbers of children. Some exceptions were found such as in the southcentral region of North York.

- Nutrition and health promotion programs - The southeast portion of North York had fewer of these resources than any other region of the city, despite the fact that this area included pockets of neighbourhoods with higher numbers of risk factors.

- Arts and cultural facilities - The majority of these resources were located in neighbourhoods with the fewest number of children.

Putting it all together: The Resource Availability Index

The Resource Availability Index provides a composite measure of the distribution of programs and services in different Census Tracts across the community. Census Tracts were used as the base of this index because EAs were not large enough for this purpose.

While many children lived in relatively high resource areas, over 50% of children aged six and younger lived in relatively resource-poor Census Tracts. Also, clusters of Census Tracts with the most resources still contained less than half of the 19 key resources identified in the Resource Availability Index. This pattern points out an apparent discrepancy between the distribution of resources in North York and the families with young children who might need them.

Acting on the evidence from the Community Mapping Study

Research results of the Community Mapping Study can bring together key actors for collective action. It can be an effective tool to reach and inform various constituencies within the community who have both a direct and an indirect influence on policies and programs affecting young children and their families. From municipal and provincial officials, to local program directors and child and family service professionals, this information can help inform decisions regarding policy, program development and funding, and set priorities.

The Community Mapping Study provides an opportunity to make professionals and the public at large more knowledgeable about the impact of the socio-economic and physical environment on children's developmental outcomes. The Social Index, augmented with supplementary research findings from the NLSCY – Community Study, demonstrating the effect of socio-economic status (income, education and employment) on child development outcomes, can provide a powerful case for improving or expanding supports for young children and their parents in areas with a high number of risk factors.

One of the early goals of the North York EYAG was to bring together the myriad of groups and services involved in supporting young children and their parents. In the absence of an integrated system of early child development, the EYAG sought to bring the various players together in an effort to promote collaboration and work towards the development of a seamless web of services designed to improve developmental outcomes for all children in North York. The results of the

Community Mapping Study provide data and information critical to moving forward on this community-wide agenda.

In some cases, the data might show the lack of a program in particular neighbourhoods or areas of the community. Or, it may show an abundance of a program in particular neighbourhoods or areas of the community. To understand the impact of these patterns, it is important to look closely at the Social Index Map (Map 13) and the Resource Availability Index Map (Map 29). The Social Index Map demonstrates whether the gap in a particular service occurs in areas with a high or low number of risk factors, or conversely, whether the clustering of a service in a particular area has a high or low level of risk factors. The Resource Availability Index Map, in addition to providing information on the overall resource availability in North York, provides data on whether the particular service – or gap in service – is located in areas with a high or low child population. Together, these maps help uncover the significance of gaps or clustering of particular programs or services, and provide a framework for discussing the spatial distribution of services, and allocation according to potential need.

The maps and information in this report, along with information from the report "Understanding the Early Years Early Childhood Development in North York" (Connor, 2001) and findings from the Early Development Instrument, will provide information on the links between children's outcomes and the factors influencing these outcomes.

In a climate of competing interests and limited funding, it is often not possible to have recommended courses of action for each research finding. Only the community can determine its priorities and the options and actors that are feasible to addressing them.

Regardless of the approach a community adopts, community response is about more than starting a new program or adding a cross walk to a busy intersection - this process is about looking holistically at problems and opportunities, basing decisions on data, and bringing the players together to move forward. By integrating all of the data on the prevalence of potential risk factors, with both the distribution of the child population and the availability of resources, community members can engage in an evidence-based discussion on what is needed to improve child development.

Critical to this discussion is the existing or potential collaboration and co-ordination of services within a particular area. Even in areas with an apparent abundance of community resources, the lack of co-ordination may reduce their efficacy and effective use by parents and their children. Some neighbourhoods may not offer the best mix of services for their particular distribution of need. The philosophy and goals of the North York EYAG embodies this integration of community resources into a seamless system of supports for children aged six and younger and their families. In addition to fostering sector collaboration and service integration, the community may also encourage the active involvement of neighbourhoods and parents in the development of early child development strategies and programs.

The First Ministers' Communiqué on Early Childhood Development (September, 2000) underlines the importance of supporting families and communities in their efforts to ensure the best possible future for their children. At the same time, the province of Ontario is planning the implementation of the Early Years Study (See McCain & Mustard, 1999.) Both of these initiatives, coupled with dedicated community commitment to children, will improve child outcomes. This report is intended to support that effort.

Appendix A: The Early Years Action Group

The North York EYAG (now Toronto, North Quadrant), established in 1996, is a broad-based coalition of organizations, associations, government, business and individuals committed to meeting the needs of children in the early years. This common vision united the EYAG in developing a comprehensive integrated plan with the goal of ensuring that every child in the community is "ready to learn" at entrance to formal school education.*

The group developed a strategy to progress towards the goal, consisting of eight main components.

1. *The state of the child*

   At birth, at entrance to formal school education, at secondary access points in between.

2. *The state of community concern*

   Mapping the community to identify, integrate and build upon the capacities, resources, services and supports.

3. *Easy access system*

   For receiving information and links to sources of support and service.

4. *Community mobilization*

   Of the larger community, geographic areas making up the larger community, and local neighbourhoods within the areas.

5. *Integrated systems of effective practices*

   In support of community mobilization at all levels.

6. *Capability to measure outcomes and to link data with community mobilization*

7. *Communication*

   To disseminate information and to share learning.

8. *Advocacy*

   To promote the integration of systems and the development of social and economic policies that support children, families and communities.

The EYAG strategy is based on four basic premises.

- Local communities are in the best position to know what conditions, supports and program options their children and families need.
- In order to achieve sustainability of conditions, the local areas require a larger community infrastructure to provide the enabling framework of integrated systems and resources.
- Communities and the infrastructure require social and economic policies that are supportive of children and families.
- Ground up community mobilization is an ongoing process which must be accompanied by regular outcome measures, each supporting the other in determining how to ensure the best life chances for children.

* More information about the EYAG can be found on their website at www.eyag.org

Appendix B: Supplementary Resource Maps

A great deal of information was collected for the purpose of this report and therefore not all of the maps could be included in the main section of the document. Additional maps of use and interest to the community are provided in this appendix.

Drop-in centres and toy lending libraries

The following additional resources can provide opportunities for learning and development of children and their parents.

- Drop-in centres (providing various programs for children and parents).
- Toy lending libraries (where families can access toys and learning resources).

Are the drop-in centres and toy lending libraries located where they are most needed? Are there obvious gaps or barriers to participation? How could these services be coordinated with other parent support and early child education services in North York?

Map S1 - Availability of drop-in centres and toy libraries

10 drop-in centres and 4 toy lending libraries were located in North York.

Many of the drop-in centres were provided by faith or ethnic communities.

Toy lending libraries were affiliated with public libraries, other learning or educationally focused organizations, and neighbourhood resource centres.

Childcare and playgroups

Social and demographic changes have resulted in a growing demand for non-parental care, making childcare an invaluable resource to many families. Quality childcare can play an important role in child development by provide educational, learning, and socializing experiences for the child.

Map S2 - Availability of childcare centres and playgroups

There were approximately 123 childcare facilities in North York.

Playgroups were clustered together, in an area with both higher incomes and fewer children.

Data were not collected in this study on such characteristics as the accessibility and quality of

As the EYAG moves towards an implementation phase, it may be useful to get a clearer picture of the kinds of early childhood education and care that are available in North York. The availability of early childhood education and care is particularly important to help parents finish school, enter a training program, or look for work as well as to support the development of their children.

Schools

Schools are one of the most important resources in a community for children and families. Schools are more than educational facilities – they are a public space used by children, teachers, parents and the community at large.

Map 53 - Availability of schools

200 elementary and secondary schools were located in North York.

- Approximately 136 were part of the public school board.
- 59 of them were separate schools, comprised of 3 French schools* and the majority administered by Catholic school boards.

Schools were distributed evenly throughout North York, with the exception of French-language schools, which were clustered together in the southeastern region.

Emergency and crisis services (police stations, fire stations, crisis centres)

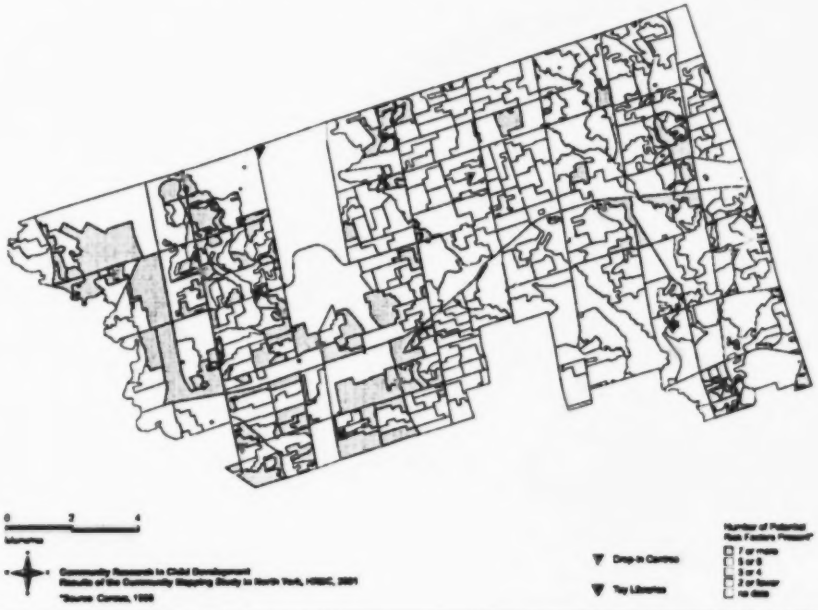
Map 54 - Availability of emergency and crisis services

There were approximately 20 fire stations and 5 police stations in the North York community. Both fire halls and police stations were distributed throughout the community, with nearly all residents likely having access to fire and police services in their neighbourhoods when needed.

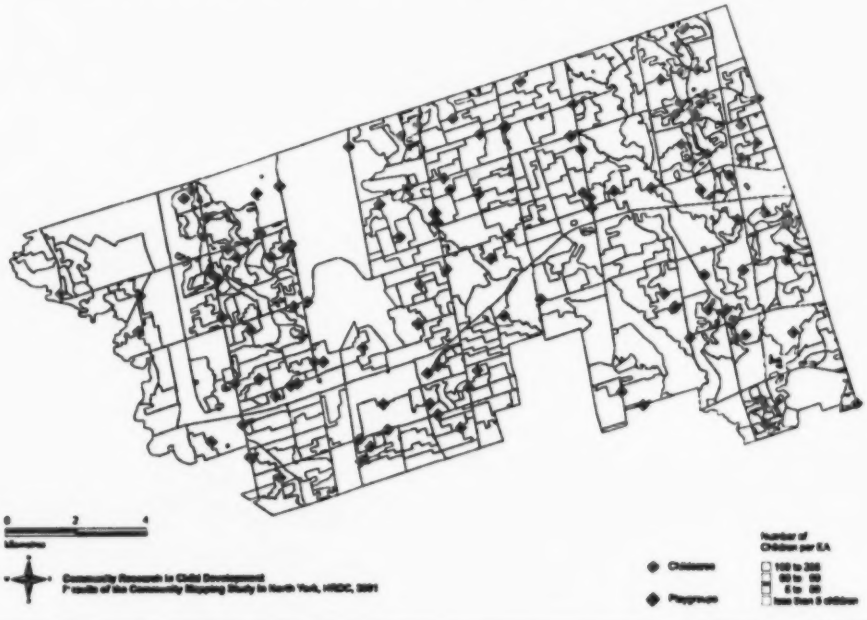
Crisis intervention centres were mostly located in the northern potion of the community.

* The map shows only two of the French-language schools as two of the schools are at the same address, with one serving grades seven and eight students and the other serving those in grades nine and above.

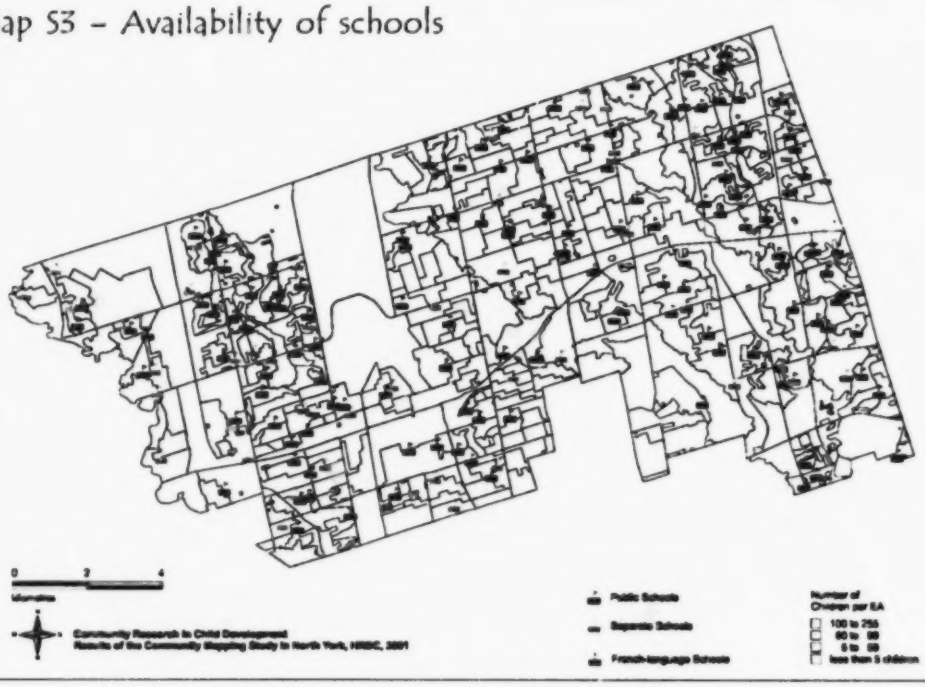
Map S1 – Availability of drop-in centres and toy libraries



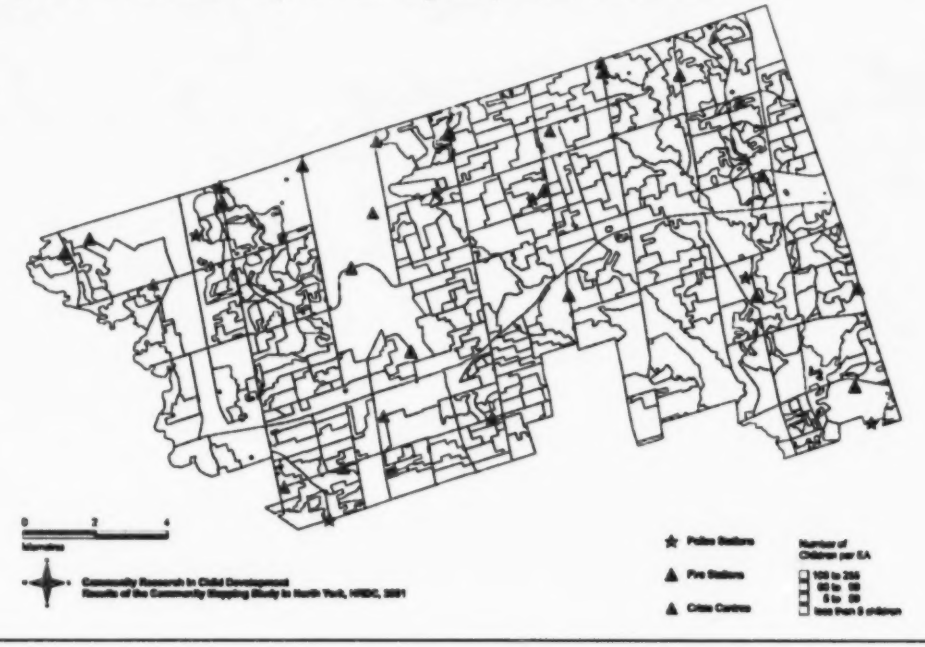
Map S2 – Availability of childcare centres and playgroups



Map 53 – Availability of schools



Map 54 – Availability of emergency and crisis services



Appendix C: Development of the Social Index

The primary goal in creating a Social Index was to present a comprehensive yet uncomplicated picture of the community's socio-economic risk factors, and to give an indication of the match of services to the needs of families and children. Based on past research, nine variables (see below) were selected for their usefulness in describing the socio-economic characteristics of communities, encompassing measures in the areas of education, employment, poverty and multiculturalism. Each variable was then compared to the national mean to evaluate the community. National means were used to make comparisons within communities and among communities, and at the same time to highlight how communities might be distinct from the country as a whole. This will be very useful as the project expands across the country.

First the values for the nine variables for each EA were compared to the national mean. Each time a value for a particular variable exceeded the national average, that EA received one point, a value equal to or below the national mean did not receive any points. An overall index was created by adding the points for the nine variables to determine each EAs overall score out of a total possible score of nine. A higher score indicated a greater presence of characteristics associated with risk and disadvantage, and thus potentially greater need for preventive or supportive services. All data for the Social Index came from the 1996 Census.

Variables included in the Social Index:

1. Employment Rate - Proportion of males aged 15 and over who were employed full time and full year (49 weeks or more) in the previous year in each EA.[a]
2. Proportion of Low income Residents – Proportion of the total population living in private households that fall below Statistics Canada's Low income Cut-Off (LICO).[b]
3. Education Level – Proportion of the population aged 15 years and over without a high school diploma.
4. Family Status – Proportion of families with children headed by lone-parents.[c]
5. Mobility – Proportion of the population that has made a residential move in the past year.[d]

[a] This variable was chosen as it gives a better indication of the labour force participation rate in a neighbourhood than do traditional unemployment rates.

[b] The Low income Cut-Offs, developed by Statistics Canada, establish income thresholds below which a family will spend a disproportionate amount of their pre-tax income on the basics of food, clothing and shelter as compared to the average family. They are created by adding 20 percentage points to the average proportion of pre-tax family income spent on food, clothing and shelter, adjusted for community and family size and updated yearly for inflation. It is below this level that a family is considered to be experiencing "straitened" circumstances.

[c] Prevalence of lone-parenthood was calculated using the number of families with children as the base rather than the number of all families, in order to focus on the typical family structure most relevant to children rather than the typical family structure in the neighbourhood.

[d] Greater family residential mobility has been associated with increased behavioural problems in children (Dewit, Offord, & Braun, 1998), while neighbourhoods with a high level of residential stability are associated with stronger social ties and collective efficacy, and thus reduced social deviance (Sampson, Raudenbush, & Earls, 1997).

6. Language – Proportion of the population who speak neither English nor French.[e]

7. Home Ownership – Proportion of private, residential dwellings that are privately owned.[f]

8. Immigrant Status – Proportion of the total population that are recent immigrants.[9]

9. Reliance on government transfers - Proportion of the total income in the EA coming from government transfer payments.[h]

[e] Although small, the proportion of the population that does not speak either official language is considered to be at an extreme disadvantage as a result of the various barriers to participation that exist - particularly labour market barriers.

[f] Home ownership, like residential stability, is believed to promote greater social cohesion and collective efficacy in neighbourhoods, and potentially reduce social deviance (Sampson, Raudenbush, & Earls, 1997).

9 Recent immigrants: immigrated in the period 1991-1996 as measured by the 1996 Census.

[h] This measure of dependency on transfers measures the share of neighbourhood income from *all* government transfer programs, including near-universal benefits (i.e. Canadian Pension Plan, Quebec Pension Plan, and children's benefits). This makes it a less precise measure of dependency than the proportion of income from welfare payments alone but such data were unavailable.

Appendix D: Results of the Neighbourhood Observations

Background and procedures

The Neighbourhood Observation instrument consisted of 19 questions to provide objective information about physical factors such as the quality of housing in the area, the lighting conditions, the noise levels and the general conditions of the streets and parks (See Connor and Brink, 1999.) for a copy of the instrument).

North York was sub-divided according to its Census EAs. Data were collected on 735 of the 795 EAs within the community (EAs with no children or populations under 40 people were excluded from the collection). Within each of these 735 EAs, one area was randomly selected for observation. Researchers were given street addresses at which to begin and complete the observations. As EAs are based on population density, many cover an extremely small area (e.g., in some cases one apartment building makes up an entire EA) and therefore only one sample within each EA was required to ensure representative results. In most cases the area assessed was approximately equivalent to two face blocks.

An EA (also a neighbourhood in this report) is the smallest standard geographic area for which census data are reported. There are 795 EAs in North York. Groups of EAs are known as Census Tracts; there are 111 Census Tracts in North York.

Two community researchers were trained to assess the neighbourhoods and completed the instrument in the summer of 1999. All observations took place during the day (between 8:00 a.m. and 6:00 p.m.).

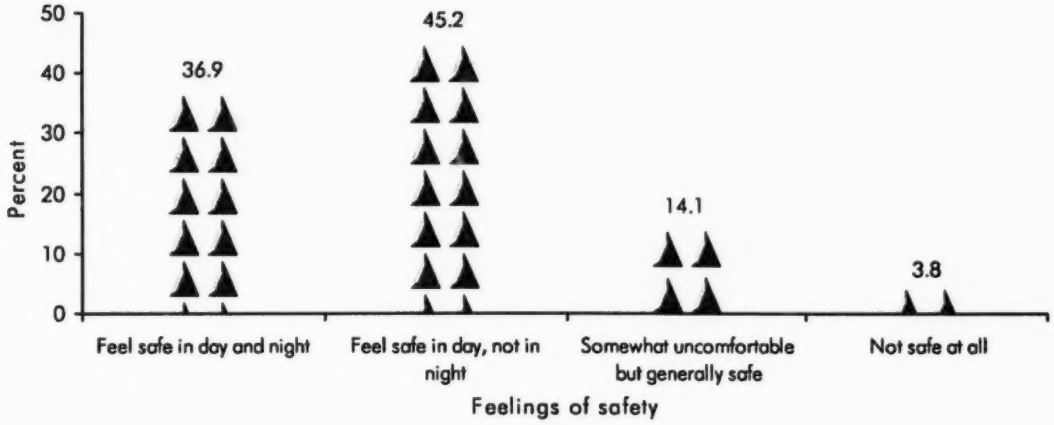
What do the neighbourhoods look like?

The majority of neighbourhoods in North York are residential (88.3%), with close to 97% being primarily for residential or commercial use. In terms of general conditions of buildings, most were in good condition, with 50.5% of neighbourhoods having been rated as having buildings that were well kept and only 8.4% as having buildings in poor or badly deteriorated condition. In addition, most of the dwellings were in good repair, with the exception of one area in the northwest and additional pockets throughout the community in which more than half of the dwellings were in need of major repairs.

Related data on the presence of abandoned houses, stores or other buildings were also collected. Very few neighbourhoods (under two %) had any abandoned buildings, however those neighbourhoods with abandoned houses were also those with greater numbers of buildings in need of major repairs.

A bus or subway stop (or other form of public transportation) was observed in 31% of the neighbourhoods. In only 11% of neighbourhoods were there signs posted announcing community events or meetings. In interpreting this finding, however, it is important to keep the size and the population of the EAs in mind. Very small EAs for instance, may be less likely to have public transit stops, or may be able to benefit from stops in neighbouring EAs.

Figure 2 – Perception of safety in the neighbourhoods



The streets and roads in the community

Most of the roads (54.1%) were rated as being in relatively good repair. Another 24% needed minor repairs or showed evidence of neglect. Most of the poorer roads were seen in the south and east areas of the community.

Lighting and noise

In terms of noise levels, 31.3% of the neighbourhoods were rated as having somewhat disturbing amounts of noise, and in almost an additional 10% of neighbourhoods, noise was rated as being excessive.

Only 5.3% of the neighbourhoods were rated as being poorly lit, which was defined as having few to no lights and being in need of better lighting. Only 15.9% of neighbourhoods, however, were rated on the opposite of the spectrum, that is being well lit with many street lights and other lighting sources. The remaining majority fell somewhere in the middle.

The people in the community

In 52% of neighbourhoods, at least one or two families with children were observed in the researchers' short visit to the area. In one-third of these, several children/families were seen. In only two of the 735 neighbourhoods assessed did the researchers observe one or more people exhibiting anti-social behaviours (e.g., intoxication, fighting).

The two researchers were also asked to rate their feelings of safety and overall comfort levels when wandering through the community.* Very few neighbourhoods generated feelings of being "unsafe" (see Figure 2).

Parks and playgrounds in the community

The presence of good parks and play spaces in children's neighbourhoods have been linked to increased participation rates in supervised and unsupervised sports activities. This participation, in turn, has been associated with better psychosocial

* It is recognized that this is a subjective assessment of the safety of the community.

adjustment in children (Offord, Lipman, and Duku, 1998). Nevertheless, the usefulness of the parks and playgrounds may be limited if the equipment present is deteriorating. Of the neighbourhoods observed, only 23% contained a park or playground. Most of them were in a good state of repair and 23.5% were rated as excellent, with new or well-maintained equipment and buildings and a safe and clean play area. Just over 50% received a rating of very good, indicating the equipment was kept in good repair or condition. Only 4.1% had play equipment that was badly deteriorated and showed signs of neglect.

Appendix E: Developing a Physical Environment Scale

Principal component analysis (PCA) is a statistical procedure used to identify underlying concepts from a number of individual questions or items. PCA was performed on the items in the neighbourhood observation instrument in order to determine if there were subsets of items on the instrument measuring physical concepts of neighbourhoods. In preparation for running the PCA, some response categories were collapsed for variables where the response categories had low frequencies. As well, items were recoded to ensure that all responses moved in the same direction (i.e., from positive to negative).

Then the scale was computed by summing up each neighbourhood's score for these items. Cases with any missing data on the relevant factors were excluded from the calculation. The index ranged from 6 to 23 (possible scores were from 6 to 24). A low-scale score represented neighbourhoods with characteristics associated with more favourable environments.

One factor consisting of seven items emerged from this process. The reliability as measured by Cronbach's Alpha was high ($\alpha = .83$). Alpha is a measure of the internal consistency of the items within a factor. The factor, comprising the *physical conditions of the neighbourhood*, was made up of the following items:

- conditions of the buildings;
- percentage of dwellings in need of repair;
- volume of traffic on the streets or roads;

- presence of garbage, litter, or broken glass;
- noise levels;
- number of stop lights observed; and
- width of the streets.

Appendix F: Design and Results of the Community Programs Survey

A community can help serve its residents by offering a wide range of programs and services to meet their needs. Programs can serve a variety of purposes: they can be purely recreational (community sports teams); they can be an educational experience (nursery schools); and they can serve as an intervention for dealing with challenges for an individual or community (alcohol or crime watch programs). These programs may offer opportunities to increase one's quality of life through a learning or recreational experience, to increase one's social contacts, and may lead to increased social cohesion in the community.

Six program types were considered to be important for young children and their families (Connor & Brink, 1999). These program categories include: education (library programs, reading clubs); health and wellness (nutrition programs, prenatal programs); entertainment and culture (music lessons, art lessons); societal (welcome programs for new immigrants, programs for children with disabilities, transportation programs); special interest (worship study programs, cultural heritage programs); and sports and recreation (sports programs, community groups).

Procedures

Community researchers contacted a variety of agencies offering programs throughout the city to get more information about the variety of programs, program clients, and barriers to accessing programs.

For the purpose of this survey, programs were defined by the following criteria:

- Programs must target children aged zero to six and/or their parents.
- Programs should target children and/or their parents directly (e.g., committee or advocacy work is not included).
- Programs should be on-going for 6 weeks or longer and have been offered at least once within the past 12 months.
- Programs may include, but are not limited to, services and support, screening or assessment, treatment or intervention, lessons, information, and counselling or assistance.
- Examples of programs for parents and/or children include: help for family violence, literacy programs, nutrition programs, prenatal programs, and food banks.
- A program could take place at more than one site and at many different times.

For the Community Program Survey two interviewers spoke with representatives from 102 programs. These programs were run by 70 agencies. All programs that met the above criteria from the Healthy Babies/ Healthy Children database and the United Way agency list were included in the survey (see Table 3). Other additional programs were sampled through a variety of sources (e.g., the Blue Book of Community Services). All interviews were conducted by telephone.

Table 3 - Program sources and number sampled from each source

Program source	*Number sampled*
Healthy Babies/ Healthy Children	41
United Way	10
Community Information Services	7
Parks and Recreation Department	12
Toronto Public Library	6
Blue Book of Community Service	6
Help We've Got Kids	9
Miscellaneous	11
Total	**102**

Note: Total does not add to 102 because of multiple categories. Percentages do not add up to 100.

What types of programs were available in North York?

Each program was identified as being one or more of the six resource categories as described above. The majority of programs could be categorized into two or more categories. Only 29.4% of programs clearly fell under only one category; 58.8% were categorized into two categories; 7.8% fell under three categories; and 3.9% fell under four categories (see Table 4).

Table 4 - Resource categories of programs

Category	*Number*	*Percent*
Education	79	77.5
Health and wellness	51	50.0
Societal	19	18.6
Sports and recreation	18	17.6
Special interest	16	15.7
Entertainment and culture	7	6.9

Who used the programs?

Programs may be offered to the general population or may target specific groups or several specific groups (e.g., support programs for women). Of the programs, 48% had a target group for their program: 20.6% reported that they targeted immigrants and refugee families; 17.6% reported that they targeted low income children or families with children; and 14.7% reported that they targeted children with special needs. Close to two-thirds of program personnel (72.0%) reported that their program adequately served the target group for whom it was intended. Another 17.3% reported that they were often able to reach their target group and 10.7% reported that they were sometimes able to reach it.

More than half (58.4%) of program personnel reported that all or almost all of their clients were from the North York area and almost a quarter (22.8%) reported that less than half of their clients are from outside of the North York area.

Increased demand and funding

In the past on to two years, funding had increased or slightly increased for 29.1% of the programs; not changed for 52.1%; and had decreased or slightly decreased for 18.8% of programs sampled. Almost three-quarters (75.3%) of respondents reported an increase in demand for their program over the same time period. Very few respondents (4.1%) reported demand had decreased.

Almost two thirds (64.5%) of the programs ran at full capacity all or almost all of the time and 15.8% reported never or almost never running at full capacity. More than one-third of programs had waiting lists (39.4%) ranging from two months to more than six months.

Accessibility of programs

Several issues could impede access to programs: lack of availability of the program in languages other than English or French; lack of availability of transportation to the program site; lack of accessibility of the program to individuals with disabilities; lack of space in programs of interest; and the presence of user fees and the availability of subsidies.

Many programs (43.6 %) were offered only in English. One-third (33.7%) of the respondents' programs had interpretation available and a quarter (22.8 %) offered their program in a language other than English. The two most common non-official languages in which programs were offered were Spanish and Chinese. Almost all programs (92.2%) were accessible by public transportation and three-quarters (75.5%) were accessible to disabled persons. One-quarter of the programs (25.5%) had a fee. Of those that charged a fee, 30.8% were financially subsidized. Therefore, language or cultural barriers, transportation and user fees could be potential barriers to some people, for some programs.

Management and auspices of programs

More than half (54.5%) of the respondents reported volunteers were not involved in management of the programs, although they may be involved in service delivery. About half of program personnel (52.9%) indicated they were at least partly government sponsored and just over half (52%) stated they were non-profit/charity. Only 11.8% indicated they were private.

More than one-third (36.3%) of the sample indicated that the municipal government funds them. Provincial ministries (28.4%) and

charitable organizations (24.5%) were the next most common sources of funding.

What makes the programs successful?

Agencies were asked what made their programs successful. The programs reported as successful were categorized into three main themes by the research analysts in North York: child health and development; parent development; and program structure.

Child health and development focused on issues such as building skills, preparing participants for school and decreasing the prevalence of physical or emotional health concerns. Survey respondents suggested their program contributed to a wide variety of physical skills like skating and swimming; emotional skills like improved self-esteem and confidence; and social skills with peers and family. Preparation for school addressed socializing with peers and enjoying out-of-home activities. A number of programs reported various successes including: decrease in child abuse; increase in birth weight; and early detection of physical and emotional problems.

Parent development programs focused largely on parent education, support and skill development. Parent education topics covered conflict training, child-health knowledge and child development. Parent-support programs included support groups that lessened isolation, short-term day care facilities and references to additional resources. Skill-development programs were mainly job and academic training.

Excellent staff and resources, quality facilities, appropriate class size, multi-service centres, advocacy initiatives, collaborative partnerships and multilingual programs were aspects of the programs which contributed to their success.

The majority of respondents did have plans or hopes to make modifications to their programs. These plans fell into one of three themes: expanding programs; increasing funding; and improving the organizational strategy.

Expanding programs involved increasing the number and creating more levels of current courses. Respondents were also interested in offering new programs including parent education, special needs, family programs, and seniors and youth classes. Other changes for the future included creating courses that are more multi-cultural and that accommodate a variety of languages. Increased funding was also a goal for some programs. More funding would be used to hire and train more staff, improve the resources available, provide transportation to the program participants and to improve the state and location of the facility. Respondents were interested in improving the overall approach or strategy of their organization. They had made plans to: increase parent participation; improve staff training in high need areas; increase community involvement; shift the focus to prevention; improve awareness of the program and the issue; and to strengthen partnerships with other organizations.

Appendix G: Developing a Resource Availability Index

The Resource Availability Index was constructed in order to provide an overall picture of neighbourhoods in the North York community based on the availability of 19 key resources. Due to their small size and large number (795), EAs were found to be inappropriate as the unit of analysis for this component of the study; therefore, Census Tracts were used in their place. Each of the 111 Census Tracts were examined for the availability of the 19 identified categories of resources and given a point for each resource that was present in the tract. Certain widely available resources appeared more than once in a Tract, and when this occurred, the Tract received multiple points. For this reason, there is a potential for Tracts to receive a score greater than 19. The Resource Availability Index ranged from 2 to 25, with an overall average of 10 resources per Tract. Four categories were then established, as follows:

1. Blue – "High Resource Area" (15 to 25 resources)
   - 20 Census Tracts were rated as "high resource areas."
   - These Tracts represented 9,385 (17.6%) of children aged six and under in North York.
2. Green – "Somewhat High Resource Area" (10 to 14 resources)
   - 35 Census Tracts were rated as "somewhat high resource areas."
   - These Tracts represented 14,915 (27.9%) of children aged six and under in North York.
3. Yellow – "Somewhat Low Resource Area" (5 to 9 resources)
   - 42 Census Tracts were rated as "somewhat low resource areas."
   - These Tracts represented 22,990 (43%) of children aged six and under in North York.
4. Pink – "Low Resource Area" (2 to 4 resources)
   - 14 Census Tracts were rated as "low resource areas."
   - These Tracts represented 6,130 (11.5%) of children aged six and under in North York.

The following categories of resources were used to compile the Resource Availability Index.

- Early Childhood Educational Programs
- Childcare Centres
- Kindergartens
- Libraries
- Literacy Programs
- Educational Workshops (accelerated education-type programs)
- Family Support Programs
- Parenting Programs
- Parent Relief Programs
- Parks
- Community Centres
- Doctors
- Hospitals
- Counselling Programs
- Food Programs (i.e., school lunch/ breakfast programs)
- Programs for children at risk (Better Beginnings Now, Community Action Programs for Children)
- Art Galleries, Museums or Cultural Centres
- Theatres and Performance Space
- Multicultural and Immigrant Services

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